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Street, 75751 Rishon LeZion (IL). **YANAI, Itai** [US/US];
55 Leicester Street, Brookline, MA 02146 (US).

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(74) Agents: **CERPA, Robert, K. et al.; Morrison & Foerster LLP**, 755 Page Mill Road, Palo Alto, CA 94304-1018 (US).

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(71) Applicants (*for all designated States except US*): **DIGISCENTS** [US/US]; Suite 720, 1814 Franklin Street, Oakland, CA 94612 (US). **YEDA RESEARCH AND DEVELOPMENT CO., LTD.** [IL/IL]; Weizmann Institute of Science, P.O. Box 95, 76100 Rehovot (IL).

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(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BELLENSON, Joel** [US/US]; 244 Lakeside Drive, Apartment 15, Oakland, CA 94612 (US). **SMITH, Dexter** [US/US]; 868 Trestle Glen Road, Oakland, CA 94610 (US). **LANCET, Doron** [IL/IL]; 15 Weizmann Street, 76280 Rehovot (IL). **GLUSMAN, Gustavo** [IL/IL]; 33/37 Ha'Alon Street, 79845 Bnei Ayish (IL). **FUCHS, Tania** [IL/IL]; 12 Harav neria

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(54) Title: **OLFACTORY RECEPTOR SEQUENCES**

(57) Abstract: The present invention provides polynucleotide sequences which encode polypeptides involved in olfactory sensation. The present invention also provides the polypeptides encoded by these polynucleotide sequences, vectors comprising these polynucleotide sequences and host cells transfected with these polynucleotide sequences. The present invention further provides for functional variants and homologues of these polynucleotide sequences and the polypeptides encoded by these polynucleotides. Libraries of polypeptides are also provided. Also included in the present invention is the use of these polypeptides and libraries of polypeptides in screening odorant molecules to determine the correspondence (scent representation, scent fingerprint or scent profile) between individual odorant receptors (the polypeptides) and particular odorant molecules. Also encompassed by the present invention is the use of the scent representation, scent fingerprint or scent profile to re-create and edit scents.

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OLFACTORY RECEPTOR SEQUENCES

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application claims priority benefit of United States Provisional Patent Application Serial No. 60/158,615, filed on October 8, 1999, and United States Provisional Patent Application Serial No. 60/184,809, filed on February 24, 2000. The contents of those applications are hereby incorporated by reference herein in their entirety.

STATEMENT OF RIGHTS TO INVENTIONS MADE UNDER FEDERALLY SPONSORED RESEARCH

10 Not applicable.

TECHNICAL FIELD

15 The present invention is in the field of human olfactory receptors and their use in screening for olfactory agonists and antagonists. The present invention pertains to isolated nucleotide sequences which encode human olfactory receptors and also to the proteins
20 encoded by said nucleotide sequences. The present invention also encompasses vectors comprising the nucleotide sequences of the invention and further, host cells transfected with said vectors. The present invention also allows for the determination of primary scents and the identification of the odor receptors which are encoded to detect these primary scents as well as the determination of secondary scents and the identification of
25 combinations of odor receptors which are encoded to detect such secondary scents.

BACKGROUND ART

Our sense of smell plays an important role not only in our appreciation of our surroundings such as the smell of flowers or new mown grass, but also evolved as a survival skill. Numerous odorant molecules can be detected at extremely low concentrations, providing early warning of danger, such as the smell of smoke or contaminated food. Indeed, a potent example of this is that most pregnant women experience a heightened sense of smell, presumably to protect the fetus from the deleterious effects of food poisoning.

It is estimated that humans can detect millions of different molecular species; however, our nose can discriminate only a fraction of these different chemicals (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320), usually estimated at about 10,000 odorants (Axel, *Scientific American* 1995, October, 154-159). Odorants for terrestrial species such as humans, are volatile (air born) ligands which are detected by the olfactory system. Odorants have vastly different chemical structures and subtle differences can lead to pronounced changes in the perceived odor (Mombaerts, *supra*). For instance, when the hydroxyl group of octanol is replaced by a carboxyl group to give octanoic acid, its perceived odor changes from orange and rose-like to rancid and sweaty (Malnic *et al.*, *Cell* 1999 96, 713-723). The basis for these feats of sensory perception are just beginning to be understood at a cellular and molecular level.

The olfactory system contains millions of olfactory sensory neurons (OSNs) located in the olfactory epithelium of the nasal cavity. In humans, the olfactory epithelium occupies an area of approximately 5 cm². The OSNs are bipolar with one end extending through the supporting cell into the mucosal layer, terminating in hairlike cilia. These cilia are the site of the olfactory receptors (OR) where the odorant ligands are thought to bind (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320, Hildebrand *et al.*, *Annu. Rev. Neurosci.*, 1997, 20, 595-631). The OSNs also have a single unbranched axon which leads to the olfactory bulb, a part of the brain containing approximately 2000 glomeruli where the axons terminate and initial processing of the sensory code takes place. OSNs expressing the same OR are randomly interspersed throughout the olfactory epithelium, but in both the nose and the bulb, information derived from different ORs is strictly segregated; each OSN in the nose and each glomerulus in the olfactory bulb appear to be dedicated to input from one or few OR type(s) (Malnic *et al.*, *Cell* 1999 96, 713-723). It also appears that the location of the glomeruli are conserved across individuals of a species, providing the first spatial processing of particular odorant patterns (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). The domains in the olfactory bulb for

different odors may overlap, but the overall patterns are distinct (Hildebrand *et al.*, *supra*), therefore, it should be possible to identify and reproduce the characteristic pattern of a given odorant. Output neurons project from the olfactory bulb to the primary olfactory cortex and from there to the higher cortical areas of the brain and to the limbic system (Malnic *et al.*,
5 *supra*; Hildebrand *et al.*, *supra*, 20, 595-631).

Until the identification of a large family of genes encoding putative odorant receptors (Buck & Axel *Cell* 1991 65, 175-187), progress towards understanding the process of odor recognition was negligible. In recent years there has been an explosion in this field as more and more putative odor receptors are isolated and cloned. The odorant receptor gene products
10 have thus far been characterized through homology as seven transmembrane domain G protein-coupled receptors (GPCR). It is estimated that there are probably 500-750 OR-like sequences in humans, while there are 500-1000 OR genes in rat and mouse (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). In mice, OR-like sequences make up approximately 1% of their genome, the largest known family in the mammalian genome, surpassing the complexity of
15 even the immunoglobulin and T-cell antigen receptor gene families (Mombaerts, *supra*). The OR are concentrated on the surface of the OSN's mucus coated cilia and it is thought that odorant molecules bind to the OR in the olfactory epithelium and thereby initiate signal transduction. Current interpretation of recent experimental evidence favors the idea that each neuron expresses only one, or very few, ORs. Since mammals can detect at least 10,000 odors and
20 there are approximately 1,000 or fewer ORs, each of the ORs must respond to several odorant molecules, and each odorant molecule must bind to several receptors. It is believed that various receptors respond to discrete parts of an odorant molecule's structure and that an odorant consists of several chemical groups each of which bind a characteristic receptor (Axel *Scientific American* 1995, October, 154-159; Malnic *et al.*, *Cell* 1999 96, 713-723).

25 The main signal transduction pathway mediated by OR homologues in vertebrate species involves G protein-mediated stimulation of adenylyl cyclase activity, resulting in cAMP elevation that opens cyclic-nucleotide gated channels with a non-specific cation selectivity (Mombaerts *Curr. Opin. Genet. Dev.* 1999 9, 315-320). However, there are still numerous unanswered questions and recently it has come to light that 38-76% of the human
30 gene OR sequences that are being reported may be pseudogenes and therefore incapable of expressing the proteins that encode the olfactory receptors. Some of the incidences may be due to the method of extracting the genomic DNA libraries (Mombaerts, *supra*). Few pseudogenes have been found in other vertebrates and their incidence in libraries from testicular DNA is also

rare (Hildebrand *et al.*, *Annu. Rev. Neurosci.*, 1997, 20, 595-631). cDNA should not contain pseudogenes. There are a number of examples of ORs which have been successfully expressed and reactions to certain odorant ligands have been determined (Malnic *et al.*, *Cell* 1999 96, 713-723; Mombaerts, *supra*; Zhao *et al.*, *Science* 1998 279, 237-242).

5 Some attempts to express the ORs in heterologous cell lines resulted in the formation of inclusion bodies rather than the insertion of the proteins into the membrane (Kiefer *et al.*, *infra*). However, purification of the receptors after expression in *E. coli* and their insertion into lipid vesicles facilitates the use of these receptors in odorant ligand screening using a combination of photoaffinity labeling and Trp fluorescence (Kiefer *et al.*, *Biochemistry* 1996 10 35, 16077-16084). In addition, a functional human OR receptor protein has been expressed in HEK-293 cells and oocytes and found to interact with odorant ligands (Wetzel *et al.*, *J. Neurosci.* 1999 19, 7426-7433). There have also been, a number of successful efforts of expressing cDNA in insect Sf9 cells using *baculovirus* vectors (Mombaerts *Annu. Rev. Neuorsci.* 1999) as well as assays with neuronal tissue (Malnic *et al.*, *Cell* 1999 96, 713-723; 15 Zhao *et al.*, 1998; Firestein *et al.*, WO 98/50081). In addition, recent work accomplished the expression of chimeric mouse olfactory receptor sequences in HEK-293 cells and showed their reactivity towards a panel of odorant ligands, some at micromolar concentrations (Krautwurst *et al.*, *Cell* 1998 95 917-926). The drawback to expression in heterologous cell systems is the lack of working signal transduction pathways which can be used to detect responses to odorant 20 ligands; these drawbacks can be overcome with methods known in the art (e. g. U.S. Pat. No. 5,798, 275). There are also methods of expressing and assaying functional neuronal receptors in neuronal cells, including methods for detecting particular odorant ligand specificity (Malnic *et al.*, *supra*; Zhao, *supra*; Firestein *et al.*, *supra*).

25 Other publications of interest are: Chemical Senses 6: 343-349 (1981); Proc. Natl. Acad. Sci. USA 79: 670-674 (1982); Proc. Natl. Acad. Sci. USA 81(6): 1859-1863 (1984); Nature 316: 255-258 (1985); Brain Research 368: 329-338 (1986); J. Biol. Chem. 261: 1299-1305 (1986); Proc. Natl. Acad. Sci. USA 83(13): 4947-4951 (1986); J. Neurosci. 6: 2146-2154 (1986); J. Neurochem. 47: 1527-1533 (1986); Chemical Senses 13: 191-204 30 (1988); Biochem. J. 260:121-126 (1989); J. Biol Chem. 264: 6780-6785 (1989); Biochim. Biophys. Acta 1013: 68-72 (1989); J. Biol. Chem. 264: 18803-18807 (1989); Biochemistry 29: 7433-7440 (1990); FEBS lett. 270: 24-29 (1990); Chemical Senses 15: 529-536 (1990); Eur. J. Biochem. 196: 51-58 (1991); Nature 349: 790-793 (1991); Neurosci. Lett. 141: 115-

118 (1992); Developmental Brain Res. 73: 7-16 (1993); Proc. Natl. Acad. Sci., USA 90: 3715-3719 (1993); Human Mol. Genetics 3: 229-235 (1994); Eur. J. Biochem. 225: 1157-1168 (1994); European Journal of Biochemistry 238: 28-37 (1996); Receptors and Channels 4: 141-147 (1996); Genomics 37(2): 147-160 (1996); Protein Science 8: 969-977 (1999); Genomics 53: 56-68 (1998); Genomics 61:24-36 (1999); Genomics 63: 227-245 (2000); Trends in Neurosci. 7:35-36 (1984); Ann. Rev. Neurosci. 9:329-355 (1986); Trends Biochem. Sci. 12:63-66 (1987); Nature 351: 275-276 (1991); Nature 353: 799-800 (1991); Current Biol. 3(10): 668-674 (1993); Nature 372:321-322 (1994); Essays in Biochemistry. 33: 93-104 (1998); and Nature, 398 (6725): 285-287 (1999).

10 However, despite the forgoing, there has been relatively little work with human olfactory receptors, in particular in determining the sequences of large numbers of receptors, and less progress in determining the correspondence between particular human olfactory receptors and the scent(s) to which they respond.

15 All publications cited herein are hereby incorporated by reference in their entirety.

DISCLOSURE OF THE INVENTION

20 An object of the invention is to determine the correspondence between ORs and the scent(s) to which they respond. Once this is accomplished, scents can be both analyzed and re-created for enhancing human experiences or eliciting particular responses. The present invention pertains to isolated polynucleotide sequences encoding polypeptides involved in olfactory sensation. The present invention also pertains to the proteins encoded by said nucleotide sequences. The present invention also encompasses vectors comprising the
25 nucleotide sequences of the invention and further, host cells transfected with said vectors. The present invention also allows for the determination of primary scents and the identification of the odor receptors which are encoded to detect these primary scents as well as the determination of receptor complex scent components and the identification of
30 components scents.

The invention provides isolated polynucleotide sequences encoding polypeptides involved in olfactory sensation that are isolated from human olfactory epithelial tissue. The invention further provides expression vectors containing such nucleotide sequences. Also provided by the invention are purified polypeptides encoded by the nucleotide sequences. The invention further provides transformed cells which comprise a suitable host cell transfected with a suitable expression vector containing the nucleotide sequence encoding the receptor. The present invention also encompasses nucleotide sequences isolated from human olfactory epithelial tissue which encode receptors capable of binding odorant molecules. The invention further provides expression vectors containing such nucleotide sequences and homologues of both the polynucleotides and polypeptides. Further, the invention provides a means of using the nucleotide sequences of the invention in a method of screening odorant ligands to determine the specific binding of odorant molecules to a particular receptors, and further, determining the component odorant molecules of subjectively experienced smells, determining the combination odorant molecules and receptor stimulation or inhibition to re-create a particular scent. The binding of odorant molecules by the receptors encompassed in the present invention includes binding resulting in both the agonism (excitation/activation) and antagonism (inhibition/blocking) of receptor function(s) upon binding of the molecule.

Accordingly, the invention includes an isolated polynucleotide comprising a sequence encoding a polypeptide which is involved in olfactory sensation. The OR polypeptides encoded are found within the sequences depicted in polynucleotide sequences SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a nucleotide sequence at least 95% homologous to said sequences. The invention also encompasses the translation products of those sequences. The invention further comprises expression vectors comprising said sequences, host cells containing such expression vectors and/or expressing the polypeptide encoded therein, or phage displaying the polypeptide encoded by the sequences. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention. The invention further encompasses fragments of said polynucleotides which can be used as probes or primers to identify additional polynucleotide sequences through techniques known in the art, including those fragments depicted in SEQ ID NOs: 74-105.

The invention also includes additional isolated polynucleotide comprising a sequence encoding a polypeptide which is involved in olfactory sensation. The OR polypeptides

encoded are found within the sequences depicted in polynucleotide sequences SEQ ID NO:153 through SEQ ID NO: 1084, or a nucleotide sequence at least 95% homologous to said sequences. The invention also comprises the translation products of those sequences. The invention further comprises expression vectors comprising said sequences, host cells containing
5 such expression vectors and/or expressing the polypeptide encoded therein, or phage displaying the polypeptide encoded by the sequences. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention.

10 The invention also encompasses an isolated and purified olfactory receptor polypeptide comprising the sequence of SEQ ID NO: 1085 through SEQ ID NO: 2008, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of SEQ ID NO: 1085 through SEQ ID NO: 2008 and having olfactory receptor function. Host cells expressing such polypeptides and phages displaying such
15 polypeptides are also encompassed by the invention. The use of functional fragments of receptors is also encompassed by the invention. Preparations of receptors, further including biological or synthetic molecules which maintain the stability and functional structure of the receptors, are also included in the invention.

Scents can be captured, analyzed and recorded by a sensory device using various
20 methods. Scent capture can be initiated by the user or by an automatic sensing system. A scent can be analyzed in terms of its interaction with olfactory neurons of a mammalian, preferably human, olfactory system, or by the expression of individual receptors under appropriate conditions and appropriate assay conditions in multiwell plates or in terms of its perception by a panel of mammalian, preferably human, subjects. The interaction with olfactory neurons can
25 be determined experimentally, in vitro, by determining the interaction of an odorant with olfactory receptors of a given type. Alternatively, the interaction with olfactory receptor can be determined using a computer simulation which provides information regarding the interaction of an odorant with the olfactory receptors. A panel of subjects can be used to represent odors in terms of their perception. The data so generated can be used to represent a scent in a manner
30 which can be recorded in digital or other format, stored in media such as computer memory, disks, or printed format, and transmitted over a data network. The representation of the scent can be used to re-create the scent at a local or remote site using an emitter module. The

representation of the scent allows for scent editing, where desirable aspects of an odor are enhanced or added and undesirable aspects are attenuated or eliminated.

Accordingly, the invention also embraces libraries of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising the
5 expression products of at least two polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084, where the polynucleotides encode functional olfactory receptors; or functional fragments of the expression products. Libraries of at least 50, 100, 200, or 500 receptors are also encompassed by the invention.

10 Also encompassed by the invention are libraries of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising at least two polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008, where the polypeptides are functional olfactory receptors; or functional fragments of the polypeptides. Libraries of at least 50, 100, 200, or 500 receptors are also encompassed by the invention.

15 The invention also embraces methods for determining the binding pattern of a composition with olfactory receptors, involving exposing the composition to an olfactory receptor library, and determining whether the composition binds to each olfactory receptor, thereby determining the overall binding pattern of the composition. In additional embodiments, the method also involves determining the approximate binding constant with
20 which the composition, or the various chemicals within the composition, bind to the receptors; determining whether a receptor or functional fragment thereof is activated; and determining the absolute amount of activation, or amount of activation relative to another receptor or a control substance. The composition can consist essentially of one compound or chemical, or can comprise at least two compounds or chemicals.

25 The invention also embraces DNA arrays or DNA chips comprising the DNA segments derived from any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084. The invention also embraces a method of determining differences among one or more individuals with respect to their olfactory faculties, comprising the steps of comparing the olfactory DNA of each individual against the array or chip.

30 The invention also embraces a method to determine single nucleotide polymorphisms in olfactory receptors, comprising the steps of uniquely amplifying olfactory receptor sequences from DNA obtained from one or more individuals, based on

primers designed according to the first 25 bases and the last 25 bases of any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084, and determining the similarities and differences between said amplified DNA and the corresponding receptor from SEQ ID NO: 153 through SEQ ID NO: 1084.

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Brief Description of the Drawings

Figure 1 depicts the isolated polynucleotide sequences, which encode polypeptides involved in olfactory sensation, corresponding to SEQ ID NOs: 1 - 73.

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Figure 2 depicts the isolated polynucleotide sequences, which encode polypeptides involved in olfactory sensation, corresponding to SEQ ID NOs: 111 - 152.

Detailed Description of the Invention

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The present invention provides isolated polynucleotides comprising sequences that encode polypeptides which are involved in olfactory sensation and which can be used to screen odorant ligands, *e.g.*, odorant receptor agonists and antagonists.

Definitions

20

The term "olfactory receptor" (OR) refers to a polypeptide involved in olfactory sensation. An "olfactory receptor polynucleotide" or "OR polynucleotide" is a polynucleotide encoding a polypeptide involved in olfactory sensation.

25

The term "odorant ligand" as employed herein refers to a molecule that has the potential to bind to an olfactory receptor. Equivalent terms employed herein include "odorant", "odorant molecule" and "odorant compound". The term "binding" or "interaction" as used herein with respect to odorant ligands refers to the interaction of ligands with the receptor polypeptide where the ligands may serve as either agonists and/or antagonists of a given receptor or receptor function. An odorant ligand may thus directly cause a perception of odor (an agonist), or may block the perception of odor (an antagonist). An odorant ligand may include, but is not limited to, molecules which interact with polypeptides involved in olfactory

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sensation. Odorant ligands and molecules which interact with olfactory receptors are generally small, approximately 1000 Daltons, more preferably approximately 750 Daltons, more preferably approximately 500 Daltons, or even more preferably approximately 300 Daltons, hydrophobic molecules with a variety of functional groups. Small changes in structure can induce profound changes in odorant ligand binding and hence in the odor perceived by an individual.

A more detailed description of these sequences, as well as how these sequences were obtained, is provided below.

As used herein, a "polynucleotide" is a polymeric form of nucleotides of any length, which contain deoxyribonucleotides, ribonucleotides, and/or their analogs. The terms "polynucleotide", "nucleotide" and "nucleic acid" as used herein are used interchangeably. Polynucleotides may have any three-dimensional structure, and may perform any function, known or unknown. The term "polynucleotide" includes double-, single-stranded, and triple-helical molecules. Unless otherwise specified or required, any embodiment of the invention described herein that is a polynucleotide encompasses both the double-stranded form and each of two complementary single-stranded forms known or predicted to make up the double stranded form. Not all linkages in a polynucleotide need be identical.

The following are non-limiting examples of polynucleotides: a gene or gene fragment, exons, introns, mRNA, tRNA, rRNA, ribozymes, cDNA, recombinant polynucleotides, branched polynucleotides, plasmids, vectors, isolated DNA of any sequence, isolated RNA of any sequence, nucleic acid probes, primers, and adaptors. A polynucleotide may comprise modified nucleotides, such as methylated nucleotides and nucleotide analogs. The use of uracil as a substitute for thymine in a deoxyribonucleic acid is also considered an analogous form of pyrimidine.

In the context of polynucleotides, a "linear sequence" or a "sequence" is an order of nucleotides in a polynucleotide in a 5' to 3' direction in which residues that neighbor each other in the sequence are contiguous in the primary structure of the polynucleotide. A "partial sequence" is a linear sequence of part of a polynucleotide which is known to comprise additional residues in one or both directions.

If present, modification to the nucleotide structure may be imparted before or after assembly of the polymer. The sequence of nucleotides may be interrupted by non-nucleotide components. A polynucleotide may be further modified after polymerization, such as by

conjugation with a labeling component. Other types of modifications included in this definition are, for example, "caps", substitution of one or more of the naturally occurring nucleotides with an analog, internucleotide modifications such as, for example, those with uncharged linkages (e.g., methyl phosphonates, phosphotriesters, phosphoamidates, cabamates, etc.) and with charged linkages (e.g., phosphorothioates, phosphorodithioates, etc.), those containing pendant moieties, such as, for example, proteins (e.g., nucleases, toxins, antibodies, signal peptides, poly-L-lysine, etc.), those with intercalators (e.g., acridine, psoralen, etc.), those containing chelators (e.g., metals, radioactive metals, boron, oxidative metals, etc.), those containing alkylators, those with modified linkages (e.g., α -anomeric nucleic acids, peptide nucleic acids, etc.), as well as unmodified forms of the polynucleotide(s).

Further, any of the hydroxyl groups ordinarily present in the sugars may be replaced by phosphonate groups, phosphate groups, protected by standard protecting groups, or activated to prepare additional linkages to additional nucleotides, or may be conjugated to solid supports. The 5' and 3' terminal OH groups can be phosphorylated or substituted with amines or organic capping group moieties of from 1 to 20 carbon atoms. Other hydroxyls may also be derivatized to standard protecting groups.

Polynucleotides can also contain analogous forms of ribose or deoxyribose sugars that are generally known in the art, including, but not limited to, 2'-O-methyl-, 2'-O-allyl, 2'-fluoro- or 2'-azido-ribose, carboxycyclic sugar analogs, α -anomeric sugars, epimeric sugars such as arabinose, xyloses or lyxoses, pyranose sugars, furanose sugars, sedoheptuloses, acyclic analogs and abasic nucleoside analogs such as methyl riboside.

Although conventional sugars and bases will be used in applying the method of the invention, substitution of analogous forms of sugars, purines and pyrimidines can be advantageous in designing a final product, as can alternative backbone structures like a polyamide backbone such as those used in peptide nucleic acids (PNAs).

A polynucleotide or polynucleotide region has a certain percentage (for example, 75%, 80%, 85%, 90%, 95% or 99%) of "sequence identity" to another sequence means that, when aligned, that percentage of bases are the same in comparing the two sequences.

Homology, as described herein, means that the polypeptide sequences that are encoded by the nucleic acids demonstrate a certain relatedness (i.e., there exists regions of conserved amino acids), but not the same amino acid identity. There is complete or 100% homology at a particular amino acid residue when the amino acids of sequences being compared are the same (there is identity) or represent a conservative amino acid substitution (there is homology). A

“conservative amino acid substitution” occurs when a particular amino acid is substituted by an alternate amino acid of similar charge density, hydrophobicity/hydrophilicity, size and/or configuration (e.g., Val for Ile). A “nonconservative amino acid substitution” occurs when a particular amino acid is substituted by an alternative amino acid of differing properties, that is, charge density, hydrophobicity/hydrophilicity, size and/or configuration (e.g., Val for Tyr). The nucleic acid sequences within the scope of the present invention include those nucleic acids which differ in exact sequence from those listed in SEQ ID NO:1 through SEQ ID NO:73 and SEQ ID NO:111 through SEQ ID NO:152 but which encode identical or homologous polypeptide amino acid sequences.

10 A “primer” is a short polynucleotide, generally with a free 3' -OH group, that binds to a target potentially present in a sample of interest by hybridizing with the target, and thereafter promoting polymerization of a polynucleotide complementary to the target.

15 An “adaptor” is a short, partially-duplexed polynucleotide that has a blunt, double-stranded end and a protruding, single-stranded end. It can be ligated, through its double-stranded end, to the double-stranded end of another polynucleotide. This provides known sequences at the ends of thus modified polynucleotides. Often adaptors contain specific sequences for primer binding and/or restriction endonuclease digestion.

20 A “probe” when used in the context of polynucleotide manipulation refers to a polynucleotide which is provided as a reagent to detect a target potentially present in a sample of interest by hybridizing with the target. Usually, a probe will comprise a label or a means by which a label can be attached, either before or subsequent to the hybridization reaction. Suitable labels include, but are not limited to radioisotopes, fluorochromes, chemiluminescent compounds, dyes, and enzymes.

25 “Transformation” or “transfection” refers to the insertion of an exogenous polynucleotide into a host cell, irrespective of the method used for the insertion, for example, lipofection, transduction, infection or electroporation. The exogenous polynucleotide may be maintained as a non-integrated vector, for example, a plasmid, or alternatively, may be integrated into the host cell genome.

30 A polynucleotide is said to “encode” a polypeptide if, in its native state or when manipulated by methods well known to those skilled in the art, it can be transcribed and/or translated to produce the polypeptide, a homologous polypeptide or a fragment thereof. For purposes of this invention, and to avoid cumbersome referrals to complementary strands, the anti-sense (or complementary) strand of such a polynucleotide is also said to encode the

sequence; that is, a polynucleotide sequence that "encodes" a polypeptide includes both the conventional coding strand and the complementary sequence (or strand).

The terms "polypeptide", "oligopeptide", "peptide" and "protein" are used interchangeably herein to refer to polymers of amino acids of any length. The polymer may be linear or branched, it may comprise modified amino acids, it may be interrupted by non-amino acids, and it may be assembled into a complex of more than one polypeptide chain. The terms also encompass an amino acid polymer that has been modified naturally or by intervention; for example, disulfide bond formation, glycosylation, lipidation, acetylation, phosphorylation, or any other manipulation or modification, such as conjugation with a labeling component. Also included within the definition are, for example, polypeptides containing one or more analogs of an amino acid (including, for example, unnatural amino acids, etc.), as well as other modifications known in the art.

In the context of polypeptides, a "linear sequence" or a "sequence" is an order of amino acids in a polypeptide in an N-terminal to C-terminal direction in which residues that neighbor each other in the sequence are contiguous in the primary structure of the polypeptide. A "partial sequence" is a linear sequence of part of a polypeptide which is known to comprise additional residues in one or both directions.

"Recombinant," as applied to a polynucleotide or gene, means that the polynucleotide is the product of various combinations of cloning, restriction and/or ligation steps, and other procedures that result in a construct that is distinct from a polynucleotide found in nature.

A "vector" is a self-replicating nucleic acid molecule that can be used to transfer an inserted nucleic acid molecule into and/or between host cells. The term includes vectors that function primarily for insertion of a nucleic acid molecule into a cell, vectors that function primarily for the amplification of nucleic acid, and expression vectors that function for transcription and/or translation of the DNA or RNA. Also included are vectors that provide more than one of the above functions.

"Expression vectors" are defined as polynucleotides which, when introduced into an appropriate host cell, can be transcribed into a mRNA capable of being translated into a polypeptide(s). An expression vector also comprises control elements operatively linked to the coding region to enable and/or facilitate expression of the polypeptide in the target cell. These can include transcriptional, translational, posttranscriptional, and posttranslational control elements, as are known in the art. An "expression system" usually connotes a suitable host cell comprised of an expression vector that can function to yield a desired expression product.

A "host cell" includes an individual cell or cell culture which can be or has been a recipient for vector(s) or for incorporation of nucleic acid molecules and/or proteins. Host cells include progeny of a single host cell, and the progeny may not necessarily be completely identical (in morphology or in genomic or total DNA complement) to the original parent cell
5 due to natural, accidental, or deliberate mutation. A host cell includes cells transfected in vivo with a polynucleotide(s) of this invention.

A "cell line" or "cell culture" denotes eukaryotic cells, derived from higher, multicellular organisms, grown or maintained in vitro. It is understood that the descendants of a cell may not be completely identical (either morphologically, genotypically, or phenotypically) to the parent cell.
10 Cells described as "uncultured" are obtained directly from a living organism, and are generally maintained for a limited amount of time away from the organism (i.e., not long enough or under conditions for the cells to undergo substantial replication).

As used herein, "expression" includes transcription and/or translation.

"Heterologous" means derived from (i.e., obtained from) a genotypically distinct entity
15 from the rest of the entity to which it is being compared. For example, a polynucleotide may be placed by genetic engineering techniques into a plasmid or vector derived from a different source, thus becoming a heterologous polynucleotide. A promoter which is linked to a coding sequence with which it is not naturally linked is a heterologous promoter.

An "isolated" or "purified" polynucleotide, polypeptide or cell is one that is
20 substantially free of the materials with which it is associated in nature. By substantially free is meant at least 50%, preferably at least 70%, more preferably at least 80%, even more preferably at least 90%, even more preferably at least 99%, and even more preferably at least 99.9% free of the materials with which it is associated in nature. As used herein, an "isolated" polynucleotide or polypeptide also refers to recombinant polynucleotides or polypeptides,
25 which, by virtue of origin or manipulation: (1) are not associated with all or a portion of a polynucleotide or polypeptide with which they are associated in nature, (2) are linked to a polynucleotide or polypeptide other than that to which they are linked in nature, or (3) do not occur in nature, or (4) in the case of polypeptides, arise from expression of recombinant polynucleotides. Thus, for example, an isolated substance may be prepared by using a
30 purification technique to enrich it from a source mixture. Enrichment can be measured on an absolute basis, such as weight per volume of solution, by specific activity or it can be measured in relation to a second, potentially interfering substance present in the source mixture. Increasing enrichments of the embodiments of this invention are increasingly more preferred.

Thus, for example, a 2-fold enrichment is preferred, 10-fold enrichment is more preferred, 100-fold enrichment is more preferred, 1000-fold enrichment is even more preferred. A substance can also be provided in an isolated state by processes such as chemical synthesis or recombinant expression.

5 A "reagent" polynucleotide, polypeptide, or antibody, is a substance provided for a reaction, the substance having some known and desirable function in the reaction. A reaction mixture may also contain a "target", such as a polynucleotide, antibody, polypeptide, or assembly of polypeptides that the reagent is capable of reacting with. For example, in some types of diagnostic tests, the presence and/or amount of the target in a sample is determined by
10 adding a reagent, allowing the reagent and target to react, and measuring the amount of reaction product (if any).

 "Hybridization" refers to a reaction in which one or more polynucleotides react to form a complex that is stabilized via hydrogen bonding between the bases of the nucleotide residues. The hydrogen bonding may occur by Watson-Crick base pairing, Hoogsteen binding, or in any
15 other sequence-specific manner. The complex may comprise two strands forming a duplex structure, three or more strands forming a multi-stranded complex, a single self-hybridizing strand, or any combination of these. A hybridization reaction may constitute a step in a more extensive process, such as the initiation of an amplification reaction such as PCR, or the enzymatic cleavage of a polynucleotide by a ribozyme.

20 When hybridization occurs in an antiparallel configuration between two single-stranded polynucleotides, those polynucleotides are described as "complementary". A double-stranded polynucleotide can be "complementary" to another polynucleotide if hybridization can occur between one of the strands of the first polynucleotide and the second. The degree to which one polynucleotide is complementary with another is quantifiable in terms of the proportion of bases in
25 opposing strands that are expected to form hydrogen bonds with each other, according to generally accepted base-pairing rules of A-T, A-U and G-C.

 A "stable duplex" of polynucleotides, or a "stable complex" formed between any two or more components in a biochemical reaction, refers to a duplex or complex that is sufficiently long-lasting to persist between formation of the duplex or complex and subsequent detection,
30 including any optional washing steps or other manipulation that may take place in the interim.

 A substance is said to be "selective" or "specific" if it reacts or associates more frequently, more rapidly, with greater duration and/or with greater affinity with a particular cell or substance than it does with alternative cells or substances. An odorant ligand "specifically

binds" to a target if it binds with greater affinity, avidity, more readily, and/or with greater duration than it binds to other substances.

As used herein, "naturally occurring," "native," or "wild type" refers to endogenous polynucleotides and the protein(s) expressed thereby. These terms include full-length and
5 processed polynucleotides and polypeptides. Processing can occur in one or more steps, and these terms encompass all stages of processing. For instance, polypeptides having or lacking a signal sequence are encompassed by the invention. "Non-naturally occurring", "non-native", or "non-wild type" refer to all other polynucleotides and polypeptides.

A "polymerase chain reaction" ("PCR") is a reaction in which replicate copies are made
10 of a target polynucleotide using one or more primers, and a catalyst of polymerization, such as a reverse transcriptase or a DNA polymerase, and particularly a thermally stable polymerase enzyme. Methods for PCR are taught in U.S. Patent Nos. 4,683,195 (Mullis) and 4,683,202 (Mullis et al.). All processes of producing replicate copies of the same polynucleotide, such as PCR or gene cloning, are collectively referred to herein as "amplification."

According to this invention, a "genomic DNA library" is a clone library which contains
15 representative nucleotide sequences from the DNA of a given genome. It is constructed using various techniques that are well known in the art, for instance, by enzymatically or mechanically fragmenting the DNA from an organism, organ, or tissue of interest, linking the fragments to a suitable vector, and introducing the vector into appropriate cells so as to
20 establish the genomic library. A genomic library contains both transcribed DNA fragments as well as nontranscribed DNA fragments.

In comparison, a "cDNA library" is a clone library that differs from a genomic library in that it contains only transcribed DNA sequences and no nontranscribed DNA sequences. It is established using techniques that are well known in the art, i.e., selection of mRNA (e.g. by
25 polyA) making single stranded DNA from a population of cytoplasmic mRNA molecules using the enzyme RNA-dependent DNA polymerase (i.e., reverse transcriptase), converting the single-stranded DNA into double-stranded DNA, cloning the resultant molecules into a vector, and introducing the vector into appropriate cells so as to establish the cDNA library.
Alternately, a cDNA library need not be cloned into a vector and/or established in cells, but can
30 be screened using PCR with gene-specific primers, as is well known in the art.

An "individual" is a vertebrate, preferably a mammal, more preferably a human.

General Techniques

The practice of the present invention will employ, unless otherwise indicated, conventional techniques of molecular biology (including recombinant techniques), microbiology, cell biology and biochemistry, which are within the skill of the art. Such techniques are explained fully in the literature, such as: "Molecular Cloning: A Laboratory Manual", second edition (Sambrook et al., 1989); "Oligonucleotide Synthesis" (M.J. Gait, ed., 1984); "Animal Cell Culture" (R.I. Freshney, ed., 1987); "Methods in Enzymology" (Academic Press, Inc.); "Gene Transfer Vectors for Mammalian Cells" (J.M. Miller & M.P. Calos, eds., 1987); "Current Protocols in Molecular Biology" (F.M. Ausubel et al., eds., 1987 and annual updates); "PCR: The Polymerase Chain Reaction", (Mullis et al., eds., 1994); "Current Protocols in Immunology" (J.E. Coligan et al., eds., 1991).

Basis for identification and description of the polynucleotides and polypeptides

The polynucleotide sequences were identified using oligonucleotide primers which were complementary to OR membrane-spanning regions. A number of different primers were used to elicit a variety of nucleotide sequences which encode polypeptides involved in olfactory sensation. The identification and isolation of nucleotide sequences which encode polypeptides involved in olfactory sensation and the polypeptides that they encode is vital for determining the response of receptors to odorant molecules, the elucidation of scent representations, profiles, or fingerprints, the reproduction of scent representations, profiles, or fingerprints and the editing of scent representations, profiles, or fingerprints.

Polynucleotides encoding polypeptides involved in olfactory sensation

The present invention provides isolated polynucleotides encoding polypeptides which are involved in olfactory sensation, vectors containing these polynucleotides, host cells containing these polynucleotides, and compositions comprising these polynucleotides. These polynucleotides are isolated and/or produced by chemical and/or recombinant methods, or a combination of these methods. The present invention includes polynucleotides isolated from the human olfactory epithelium which encode polypeptides which are involved in olfactory sensation, vectors containing these polynucleotides, host cells containing these polynucleotides, and compositions comprising these polynucleotides. Unless specifically stated otherwise,

“polynucleotides” shall include all embodiments of the polynucleotides of this invention. These polynucleotides are useful as probes, primers, in expression systems, and, in a preferred embodiment, in screening methods as described herein. In one embodiment the polynucleotides of the present invention can be isolated by creating a cDNA library using
5 template RNA from human olfactory epithelium tissue. A detailed example is related in Example 1, below.

The advantage of constructing a cDNA library for isolation of the desired nucleotide sequences is that the likelihood of obtaining pseudogenes is greatly reduced compared to using a genomic DNA library for the same purpose. cDNA libraries contain only mRNA expressed
10 in the tissue used for the construction of the library, in this case, the human olfactory epithelium. The preferred olfactory epithelium tissue should express only those nucleotide sequences which are relevant for olfactory function, thereby excluding nonfunctioning pseudogenes and also GPCRs which may be similar in primary structure (amino acid sequence) but are not encoded in OSNs. As the number of GPCRs utilized in human signal transduction
15 pathways is extremely wide and varied, cDNA libraries constructed using olfactory tissue are preferable for isolating nucleotide sequences that encode polypeptides which are involved in olfactory sensation, inasmuch as genomic libraries can contain abundant nucleotide sequences which encode for a variety of GPCRs performing numerous functions, and are likely to contain pseudogenes.

The isolation of polynucleotide sequences which encode polypeptides involved in olfactory sensation is described in Example 1. Accordingly, this invention provides isolated polynucleotides that contain sequences encoding polypeptides or portions thereof which are involved in olfactory sensation, wherein the polypeptide is at least 10 amino acids in length, and wherein the polynucleotide sequences are depicted in SEQ ID NOs:1-73 and SEQ ID
20 NOs:111-152.
25

The invention includes modifications to said polynucleotides described above such as deletions, substitutions, additions, or changes in the nature of any nucleic acid moieties. A “modification” is any difference in nucleotide sequence as compared to a polynucleotide shown herein to encode a polypeptide involved in olfactory sensation, and/or any difference in
30 the nucleic acid moieties of the polynucleotide(s), wherein such a modified polynucleotide encodes a polypeptide involved in olfactory sensation or a variant of said polypeptide that is useful in the practice of the invention. Such changes can be useful to facilitate cloning and modify expression of polynucleotides encoding polypeptides which are involved in olfactory

sensation. Such changes also can be useful for conferring desirable properties to the polynucleotide(s), such as stability. The definition of polynucleotide provided herein gives examples of these modifications. Hence, the invention also includes variants of the nucleic acid sequences disclosed herein, which include nucleic acid substitutions, additions, and/or deletions.

The invention also encompasses polynucleotides encoding polypeptides involved in olfactory sensation, including polynucleotides that are full-length, processed, coding, non-coding (including flanking region) or portions thereof, provided that these polynucleotides contain a region encoding at least a portion of a polypeptide involved in olfactory sensation. (That is, the region encodes a functional fragment of an olfactory receptor or other polypeptide involved in olfactory sensation.) Also embodied are the mRNA, cDNA and genomic DNA sequences and fragments thereof that include a polynucleotide sequence comprising a coding sequence for a portion of a polypeptide involved in olfactory sensation.

Genes encoding human olfactory receptors, and optionally including related genomic sequences such as regulatory sequences, can be obtained using olfactory receptor cDNAs as hybridization probes. Under high stringency hybridization conditions, an OR cDNA will hybridize to its cognate OR gene. Use of lower stringency hybridization conditions allows the isolation of OR genes that are related to, but not identical with, the gene corresponding to a particular OR cDNA.

Conditions for hybridization are well-known to those of skill in the art and can be varied within relatively wide limits. Hybridization stringency refers to the degree to which hybridization conditions disfavor the formation of hybrids containing mismatched nucleotides, thereby promoting the formation of perfectly matched hybrids or hybrids containing fewer mismatches; with higher stringency correlated with a lower tolerance for mismatched hybrids. Factors that affect the stringency of hybridization include, but are not limited to, temperature, pH, ionic strength, and concentration of organic solvents such as formamide and dimethylsulfoxide. As is well known to those of skill in the art, hybridization stringency is increased by higher temperatures and/or lower ionic strengths. See, for example, Ausubel et al., supra; Sambrook et al., supra; M.A. Innis et al. (eds.) PCR Protocols, Academic Press, San Diego, 1990; B.D. Hames et al. (eds.) Nucleic Acid Hybridisation: A Practical Approach, IRL Press, Oxford, 1985; and van Ness et al., (1991) Nucleic Acids Res. 19:5143-5151. The degree of stringency can be adjusted not only during a hybridization reaction, but also in post-hybridization washes, as is known to those of skill in the art.

The invention also encompasses polynucleotides encoding polypeptides involved in olfactory sensation, functionally equivalent variants and derivatives of full-length polypeptides involved in olfactory sensation and functionally equivalent fragments. For instance, changes in a DNA sequence that do not change the encoded amino acid sequence, as well as those that result in conservative substitutions of amino acid residues, non-deleterious non-conservative substitutions, one or a few amino acid deletions or additions, and substitution of amino acid residues by amino acid analogs, will not significantly affect properties of the encoded polypeptide. Polypeptides homologous to the polypeptides encoded by the polynucleotides described herein can also be identified using algorithms and methods well-known to those of skill in the art, such as those described in Ausubel, "Current Protocols in Molecular Biology," Chapter 19; see also Altschul, S.F., Gish, W., Miller, W., Myers, E.W. & Lipman, D.J. (1990) "Basic local alignment search tool." J. Mol. Biol. 215:403-410; Gish, W. & States, D.J. (1993) "Identification of protein coding regions by database similarity search." Nature Genet. 3:266-272; Madden, T.L., Tatusov, R.L. & Zhang, J. (1996) "Applications of network BLAST server" Meth. Enzymol. 266:131-141; Altschul, S.F., Madden, T.L., Schäffer, A.A., Zhang, J., Zhang, Z., Miller, W. & Lipman, D.J. (1997) "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs." Nucleic Acids Res. 25:3389-3402; and Zhang, J. & Madden, T.L. (1997) "PowerBLAST: A new network BLAST application for interactive or automated sequence analysis and annotation." Genome Res. 7:649-656. A preferred method of determining homology is the BLAST set of similarity search programs (Altschul, S.F., Gish, W., Miller, W., Myers, E.W. & Lipman, D.J. (1990) "Basic local alignment search tool." J. Mol. Biol. 215:403-410. Polypeptides which are 40% homologous, 50% homologous, 60% homologous, 70% homologous, 80% homologous, 90% homologous, 95% homologous, or 99% homologous to the polypeptides encoded by the polynucleotides described herein are encompassed by the invention.

Nucleotide substitutions that do not alter the amino acid residues encoded can be useful for optimizing gene expression in different systems. Suitable substitutions are known to those of skill in the art and are made, for instance, to reflect preferred codon usage in the particular expression systems. In another example, alternatively spliced polynucleotides can give rise to different functionally equivalent fragments or variants of an polypeptide involved in olfactory sensation. Alternatively processed polynucleotide sequence variants are defined as polynucleotide sequences corresponding to mRNAs that differ in sequence from one another but are derived from the same genomic region, for example, mRNAs that result from: 1) the

use of alternative promoters; 2) the use of alternative polyadenylation sites; and/or 3) the use of alternative splice sites.

Preparation of polynucleotides involved in olfactory sensation

5 The polynucleotides of this invention can be obtained using chemical synthesis, recombinant methods, or PCR.

Methods of chemical polynucleotide synthesis are well known in the art and need not be described in detail herein. One of skill in the art can use the sequences provided herein and a commercial DNA synthesizer to produce a desired DNA sequence.

10 For preparing polynucleotides which encode polypeptides involved in olfactory sensation using recombinant methods, a polynucleotide comprising a desired sequence can be inserted into a suitable vector, and the vector in turn can be introduced into a suitable host cell for replication and amplification. Polynucleotides may be inserted into host cells by any means known in the art. Cells are transformed by introducing an exogenous polynucleotide by direct
15 uptake, endocytosis, transfection, F-mating, particle bombardment, liposome mediation, or electroporation. Once introduced, an exogenous polynucleotide can be maintained within the cell as a non-integrated vector (such as a plasmid) or integrated into the host cell genome. The polynucleotide encoding a polypeptide involved in olfactory sensation can be isolated from the host cell by methods well known within the art. See, e.g., Sambrook et al. (1989).

20 Alternatively, PCR allows amplification of DNA sequences. PCR technology is well known in the art and is described in U.S. Pat. Nos. 4,683,195, 4,800,159, 4,754,065 and 4,683,202, as well as *PCR: The Polymerase Chain Reaction*, Mullis et al. eds., Birkhausw Press, Boston (1994).

RNA can be obtained in a number of ways in an appropriate vector and the vector is
25 transformed into a suitable host cell. When the inserted DNA is transcribed into RNA, the RNA can then be isolated using methods well known to those of skill in the art, as set forth in Sambrook et al., (1989), for example. RNA can also be obtained through in vitro reactions. For example, the polynucleotide, which encodes a polypeptide involved in olfactory sensation, can be inserted into a vector that contains appropriate transcription promoter sequences.

30 Commercially available RNA polymerases will specifically initiate transcription at their promoter sites and continue the transcription process through the adjoining DNA polynucleotides. Placing the polynucleotide sequences which encode polypeptides involved in

olfactory sensation between two such promoters allows the generation of sense or antisense strands of desired RNA.

5 ***Cloning and expression vectors comprising polynucleotide sequences encoding polypeptides involved in olfactory sensation***

The present invention further includes a variety of vectors containing polynucleotides encoding polypeptides involved in olfactory sensation. These vectors can be used for expression of recombinant polypeptides as well as a source of polynucleotides which encode polypeptides involved in olfactory sensation. Cloning vectors can be used to obtain replicate
10 copies of the polynucleotides, which encode polypeptides involved in olfactory sensation, they contain, or as a means of storing the polynucleotides in a depository for future recovery. Expression vectors (and host cells containing these expression vectors) can be used to obtain polypeptides produced from the polynucleotides they contain. Suitable cloning and expression vectors include any known in the art, e.g., those for use in in vitro, bacterial, mammalian, yeast
15 and insect expression systems. Specific vectors and suitable host cells are known in the art and need not be described in detail herein. For example, see Gacesa and Ramji, *Vectors*, John Wiley & Sons (1994).

Cloning and expression vectors typically contain a selectable marker (for example, a gene encoding a protein necessary for the survival or growth of a host cell transformed with the
20 vector), although such a marker gene can be carried on another polynucleotide sequence co-introduced into the host cell. Only those host cells into which a selectable marker has been introduced will survive and/or grow under selective conditions. Typical selectable markers encode protein(s) that (a) confer resistance to antibiotics or other toxins substances, e.g., ampicillin, neomycin, methotrexate, etc.; (b) complement auxotrophic deficiencies; or (c)
25 supply critical nutrients not available from complex media. The choice of the proper marker gene will depend on the host cell, and appropriate genes for different hosts are known in the art. Cloning and expression vectors also typically contain a replication system recognized by the host.

Suitable cloning vectors may be constructed according to standard techniques, or may
30 be selected from a large number of cloning vectors available in the art. While the cloning vector selected may vary according to the host cell intended to be used, useful cloning vectors will generally have the ability to self-replicate in an appropriate host, may possess a single target for one or more particular restriction endonucleases, and/or may carry genes for a marker

that can be used in selecting clones containing the vector. Suitable examples include plasmids and bacterial viruses, e.g., pUC18, pUC19, m13mp18, m13mp19, pBR322, pMB9, ColE1, pCR1, RP4, phage DNAs, and shuttle vectors such as pSA3 and pAT28. These and many other cloning vectors are available from commercial vendors such as BioRad, Stratagene, and

5 Invitrogen.

Expression vectors generally are replicatable polynucleotide constructs that contain a polynucleotide encoding an polypeptide involved in olfactory sensation of interest. The polynucleotide, which encodes a polypeptide involved in olfactory sensation, encoding the polypeptide is operatively linked to suitable transcriptional controlling elements, such as

10 promoters, enhancers and terminators. For expression (i.e., translation), one or more translational controlling elements are also usually required, such as ribosome binding sites, translation initiation sites, and stop codons. These controlling elements (transcriptional and translational) may be derived from the gene encoding polypeptides involved in olfactory sensation, or they may be heterologous (i.e., derived from other genes and/or other organisms).

15 A polynucleotide sequence encoding a signal peptide can also be included to allow a polypeptide involved in olfactory sensation to cross and/or lodge in cell membranes or be secreted from the cell. A number of expression vectors suitable for expression in eukaryotic cells including yeast, insect, avian, plant and mammalian cells are known in the art. Common vectors, such as YEp13 and the Sikorski series pRS303-306, 313-316, 423-426 can also be

20 used. Vectors pDBV52 and pDBV53 are suitable for expression. Another example of an expression vector/host cell system is the baculovirus (e.g., nuclear polyhedrosis virus)/insect cell (e.g., sf9 cells) system.

Human olfactory receptor polypeptides are expressed from olfactory receptor cDNA by methods well-known to those of skill in the art. A cDNA or portion thereof is inserted in an

25 expression vector using standard molecular cloning techniques. Coupled in vitro transcription and translation of such a vector results in expression of the OR protein encoded by the cDNA. In vivo expression of a OR polypeptide is accomplished by inserting an OR cDNA into a eucaryotic or procaryotic expression vector, of which many are known in the art, to generate an OR expression construct. The OR expression construct is introduced into an appropriate

30 host cell in which the OR sequences are expressed (by transcription and translation) and optionally secreted, and the expressed OR polypeptide is obtained from the cell growth medium and/or from cell lysates.

A number of expression vectors are known in the art. Prokaryotic expression vectors include, but are not limited to, T7 RNA polymerase/T7 promoter-based vectors, bacteriophage λ -based vectors and various types of fusion vectors. Fusion vectors include, but are not limited to, lacZ and trpE fusion vectors, maltose binding protein fusion vectors, glutathione-S-transferase fusion vectors, and thioredoxin fusion vectors. Baculovirus-based vectors are used for expression in insect cell systems. Expression in mammalian cells (such as HEK, COS and CHO cells) utilizes vectors containing a mammalian origin of replication (such as, for example, a SV40 origin), an efficient promoter (optionally including one or more enhancer sequences), mRNA processing signals (e.g., splice sites and polyadenylation sites), one or more selectable markers, and optionally a prokaryotic replicon to allow propagation and manipulation of the construct in prokaryotic cells. Alternatively, expression in mammalian cells is achieved through the use of any of a number of mammalian viral vectors including, but not limited to, retroviruses, lentiviruses, Semliki Forest viruses, vaccinia viruses, adenoviruses and adeno-associated viruses.

Vectors containing the polynucleotides of interest can be introduced into the host cell by any of a number of appropriate means, including electroporation, direct injection, transfection employing calcium chloride, rubidium chloride, calcium phosphate, DEAE-dextran, or other substances; microprojectile bombardment; lipofection; and infection (where the vector is an infectious agent, such as a virus). The choice of means of introducing vectors or polynucleotides encoding polypeptides involved in olfactory sensation will often depend on the host cell, as will be well known to those of skill in the art.

Host cells transformed with polynucleotides encoding polypeptides involved in olfactory sensation

Another embodiment of this invention are host cells transformed with (i.e., comprising) polynucleotides encoding polypeptides involved in olfactory sensation, and/or vectors having polynucleotide(s) sequences encoding polypeptides involved in olfactory sensation, as described above. Both prokaryotic and eukaryotic host cells may be used. Prokaryotic hosts include bacterial cells, for example *E. coli*, *B. subtilis*, and mycobacteria. Among eukaryotic hosts are yeast, insect, avian, plant and mammalian cells. Host systems are known in the art and need not be described in detail herein.

The host cells of this invention can be used, *inter alia*, as repositories of polynucleotides encoding polypeptides involved in olfactory sensation, and/or vehicles for

production of polynucleotides encoding polypeptides involved in olfactory sensation, and/or polypeptides involved in olfactory sensation . They may also be used as vehicles for *in vivo* delivery of polypeptides involved in olfactory sensation .

5 ***Uses for and methods using polynucleotides encoding polypeptides involved in olfactory sensation***

To determine whether a vector containing polynucleotides is capable of expressing in eukaryotic cells, cells such as, for example, COS-7 (primate origin), CHO (rodent origin), HEK-293 (human origin), or HeLa (human origin) cells can be transfected with the vector.

- 10 Expression of a polypeptide(s) encoded by the vector is then determined by, for example, RIA, ELISA, immunofluorescence of fixed cells, or western blotting of cell lysate using an antibody as a probe. Antibodies can be obtained using, as immunogen, peptide sequences synthesized from the protein sequences encoded by the known polynucleotide sequence. Polypeptides can be purified by, for example, phase partitioning, affinity methods, gel filtration and ion
- 15 exchange, as well as additional methods known by those skilled in the art. Further characterization of the expressed polypeptide can be achieved by purification of the polypeptide using techniques known in the art.

Polypeptides involved in olfactory sensation

- 20 The present invention encompasses polypeptides involved in olfactory sensation. Expression of said polypeptides is localized in the olfactory neurons located in the olfactory epithelium, as described earlier. The polypeptides may comprise any novel sequence encoded by a nucleotide sequence as depicted in SEQ ID NO:1 through SEQ ID NO:73 and SEQ ID NO:111 through SEQ ID NO:152.

- 25 The invention includes modifications to polypeptides involved in olfactory sensation including functionally equivalent fragments of the polypeptides involved in olfactory sensation which do not significantly affect their properties and variants which may have enhanced or decreased activity. Collectively, these modifications may be termed "analogs" of or a fragment of polypeptides involved in olfactory sensation. Modification of polypeptides is routine practice in
- 30 the art and need not be described in detail herein. Examples of modified polypeptides include polypeptides with conservative substitutions of amino acid residues, one or more deletions or additions of amino acids which do not significantly deleteriously change the functional activity, or use of chemical analogs. Amino acid residues which can be conservatively substituted for

one another include but are not limited to: glycine/alanine; valine/isoleucine/leucine; asparagine/glutamine; aspartic acid/glutamic acid; serine/threonine; lysine/arginine; and phenylalanine/tyrosine. Such conservative substitutions are known in the art, and preferably, the amino acid substitutions would be such that the substituted amino acid would possess
5 similar chemical properties as that of the original amino acid. These polypeptides also include glycosylated and non-glycosylated polypeptides, as well as polypeptides with other post-translational modifications, such as, for example, glycosylation with different sugars, acetylation, and phosphorylation. Amino acid modifications can range from changing or modifying one or more amino acids to complete redesign of a region. Other methods of
10 modification include using coupling techniques known in the art, including, but not limited to, enzymatic means, oxidative substitution and chelation. Modified polypeptides involved in olfactory sensation are made using established procedures in the art.

The invention also encompasses fusion proteins comprising one or more polypeptides involved in olfactory sensation. For purposes of this invention, a fusion protein contains one
15 or more polypeptides involved in olfactory sensation and another amino acid sequence to which it is not attached in the native molecule, for example, a heterologous sequence or a homologous sequence from another region. Useful heterologous sequences include, but are not limited to, sequences that provide for secretion from a host cell, intracellular trafficking, and stability/degradation. Other useful heterologous sequences are ones which facilitate
20 purification. Examples of such sequences are known in the art and include those encoding epitopes such as Myc, HA (derived from influenza virus hemagglutinin), His-6, or FLAG. Other heterologous sequences that facilitate purification are derived from proteins such as glutathione S-transferase (GST), maltose-binding protein (MBP), or the Fc portion of immunoglobulin.

25

Preparation of polypeptides involved in olfactory sensation

The polypeptides of this invention can be made by procedures known in the art. The polypeptides can be produced by recombinant methods (i.e., single or fusion polypeptides) or by chemical synthesis. Polypeptides, especially shorter polypeptides up to about 50 amino
30 acids, are conveniently made by chemical synthesis. Methods of chemical synthesis are known in the art and are commercially available. For example, a polypeptide can be produced by an automated polypeptide synthesizer employing the solid phase method. Polypeptides can also be made by chemical synthesis using techniques known in the art.

Polypeptides can also be made by expression systems, using recombinant methods. The availability of polynucleotides encoding polypeptides permits the construction of expression vectors encoding intact (i.e., native) polypeptide, functional equivalents and functional fragments thereof, modified forms or recombinant forms. A polynucleotide
5 encoding the desired polypeptide, or a fusion protein, can be ligated into an expression vector suitable for any convenient host. Both eukaryotic and prokaryotic host systems can be used. The polypeptide is then isolated from lysed cells or from the culture medium and purified to the extent needed for its intended use. Purification or isolation of the polypeptides expressed in host systems can be accomplished by any method known in the art (e.g. partitioning exclusion,
10 ion exchange chromatograph, gel filtration, etc.). Other controlling transcription or translation segments, such as signal sequences that direct the polypeptide to a specific cell compartment (i.e., for secretion), can also be used. Examples of prokaryotic host cells are known in the art and include, for example, *E. coli* and *B. subtilis*. Examples of eukaryotic host cells are known in the art and include yeast, avian, insect, plant, and animal cells such as COS7, HeLa, CHO,
15 HEK-293 and other mammalian cells.

Alternatively, in vitro expression systems may also be used to produce polypeptides involved in olfactory sensation. A plasmid containing a polynucleotide encoding polypeptides involved in olfactory sensation, under the control of an appropriate promoter, can be transcribed and the resultant RNA translated in vitro through the use of commercially
20 available reagents. Such methods can be used to produce relatively pure samples of the polypeptide and are known in the art.

Preferably, the polypeptides are at least partially purified from other cellular constituents. In one embodiment, the polypeptides are at least 70%, more preferably at least 80%, even more preferably at least 90% or most preferably at least 95% pure. In this context,
25 purity can be calculated as a weight percent of the total protein content of the preparation. More highly purified polypeptides may also be obtained and are encompassed by the present invention. Methods of protein purification are known in the art and are not described in detail herein. For membrane-bound proteins, the lipid content of the preparation, which is required to maintain the structure and function of the protein, is excluded from the purity calculation. That
30 is, if a preparation weighing 10 mg has 5 mg lipid, 4 mg of desired protein, and 1 mg of undesired proteins, the purity is calculated as 80% (desired protein content divided by total protein content). Preparations of biological or synthetic molecules suitable for maintaining structure and function of membrane proteins are described in Etemadi AH (1985) *Adv Lipid*

Res 1985;21:281-428; Villalobo A (1990) *Biochimica Et Biophysica Acta*, 1017(1):1-48; Montal M (1987) *Journal Of Membrane Biology* 98(2): 101-115; Scotto AW et al. (1987) *Biochemistry* 26(3): 833-839; Jain MK and Zakim D (1987) *Biochimica Et Biophysica Acta* 906(1): 33-68; Czerski L and Sanders CR (2000) *Anal Biochem* 284(2):327-33 (lipid-
5 detergent mixtures or "bicelles"); Hrafnisdottir S and Menon AK (2000) *J Bacteriol* 182(15):4198-206 (proteoliposomes); Puu G et al. (2000) *Biosens Bioelectron* 15(1-2):31-41 (protein-lipid preparations on solid surfaces); Schafmeister CE et al. (1993) *Science* 262(5134):734-8 ("peptitergents").

10 *Uses of polypeptides involved in olfactory sensation*

The polypeptides of this invention have a variety of uses. They can be used, for example, to screen odorant ligands in order to determine the scent representations, scent profiles or scent fingerprints of particular odorant molecules and further to characterize the effect of functional groups and chemical characteristics on perceived smell. Methods for screening odorant
15 compounds using odorant receptors in neuronal cells are known in the art (Firestein et al., WO 98/50081; Duchamp-Viret et al., *Science* 1999, 284 2171-2174; Sato et al., *J. Neurophys.* 1994 72 2980-2989; Malnic et al., *Cell* 1999 96 713-723; Zhao et al., *Science* 1998 279, 237-242). There are also methods which can be employed to screen odorant compounds which do not require neuronal cells and are known in the art (Kauvar et al., U. S. Pat. No. 5,798,275; Kiefer et al.,
20 *Biochemistry* 1996 35 16077-16084; Krautwurst et al., *Cell* 1998 95 917-926),

Analysis of the scent can be performed in a number of ways. Various embodiments of the scent analysis system are presented. Examples of how these embodiments might operate are also presented, although it should be emphasized that the invention is not limited by any
25 particular theory of olfactory perception or scent analysis.

Olfactory Space

The sensory subsystem comprises a series of olfactory receptors, which selectively bind with the chemical component(s) making up the scent. The scent can be characterized in terms
30 of which of the approximately 1,000 olfactory receptors the scent component(s) bind to, and the strength of the interaction of the component(s) with those receptors. Each olfactory receptor can be considered an orthogonal basis vector; the entire set of olfactory receptors can be considered a set of basis vectors spanning "olfactory space." This is analogous to vectors

pointing along the x, y, and z directions in three-dimensional space, where any point in space can be represented by a combination of the x, y, and z basis vectors (with each of the x, y, and z vectors multiplied by the appropriate scalar quantity). The intensity of interaction of a scent with an olfactory receptor determines the magnitude of the vector along that particular "axis" in olfactory space. Thus, every scent can be uniquely described by a vector representation in olfactory space.

A representation of a scent in such a manner that the scent can later be re-created is defined as scent profiling. The aforementioned vector representation is one example of a scent profile.

Primary Scents

For the purposes of this invention, a receptor primary scent component is defined as a chemical that interacts with one and only one scent receptor. A receptor complex scent component is defined as a chemical that interacts with more than one scent receptor; the receptor complex scent component can interact with each of the scent receptors to different degrees, to equal degrees, or can interact with some receptors to the same degree and others to different degrees.

Olfactory receptors are proteins which fall in the class of seven transmembrane domain G protein-coupled receptors, and are found in olfactory neurons *in vivo*. Binding of an odorant to an olfactory receptor causes second messenger systems to become activated or inhibited in the cell, leading to increased cellular production of second messenger molecules such as cyclic AMP. These second messenger systems in turn lead to the depolarization of the olfactory neuron, or other changes in the state of the neuron, which provides the signal to the nervous system that the odorant has been detected.

With a complete set of receptor primary scent components, any scent can be re-created with the knowledge to the degree to which it interacts with each olfactory receptor. The instant invention encompasses such complete sets of receptor primary scent components. Other embodiments of the invention encompass sets of receptor primary scent component chemicals which provide the ability to re-create a particularly desired subset of scents, but not necessarily all possible scents. Still more embodiments encompass sets of receptor primary scent component chemicals which provide the ability to approximate particular scents, while not necessarily exactly re-creating the interaction profile of the particular scents.

In some cases, a receptor complex scent will be an acceptable approximation to a receptor primary scent. That is, if a given receptor complex scent interacts with a first scent receptor strongly, but interacts with other scent receptors less strongly, it can be considered an approximation to a receptor primary scent component for the first receptor. Such a receptor complex scent component is described by the term receptor quasi-primary scent component. One embodiment of the invention encompasses sets of receptor quasi-primary scent component chemicals suitable for re-creating all scents. Another embodiment of the invention encompasses sets of receptor quasi-primary scent component chemicals suitable for re-creating a particularly desired subset of scents, but not necessarily all possible scents. Yet another embodiment encompasses sets of receptor quasi-primary scent component chemicals which provide the ability to approximate particular scents, while not necessarily exactly re-creating the interaction profile of the particular scents.

The identification of receptor primary or quasi-primary scent component chemicals provides the most conceptually straightforward method of re-creating scents. However, another embodiment of the invention encompasses the use of receptor complex scent components for re-creating scents. An example of such an embodiment would be re-creation of a scent that activates olfactory receptors designated OR1, OR2, OR3, OR4, OR5 and OR6 (for the sake of illustration, it is assumed that the olfactory receptors are stimulated to an equal extent). If one is in possession of two receptor complex scent component chemicals (RCSC's) where RCSC1 activates OR1 and OR5, and RCSC2 activates OR2, OR3, OR4, and OR6, then one can reproduce the original scent by mixing RCSC1 and RCSC2 to re-create the original olfactory receptor activation profile. In practice, the profiles of various receptor complex scent components will be much more complicated than the forgoing example, and components which inhibit olfactory activation as well as stimulate activation can be included in the sets. However, once receptor activation profiles of sufficient receptor complex scent components are known, computer algorithms can be utilized to create the appropriate combination of receptor complex scent components. Using vector representations of the olfactory receptor activation profiles for a set of receptor complex scent components, one can create linear combinations of such receptor complex scent components in order to represent a particular scent. For the example given above, such a vector representation would look like (1, 0, 0, 0, 1, 0) for the first receptor complex scent component and (0, 1, 1, 1, 0, 1) for the second receptor

complex scent component, while the vector representation of the scent to be re-created is (1, 1, 1, 1, 1, 1). If x_1 and x_2 are the relative proportions of the first receptor complex scent component and the second receptor complex scent component, respectively, to be combined to re-create the scent, then the problem can be represented as a series of linear equations:

$$\begin{array}{rclcl}
 1x_1 & + & 0x_2 & = & 1 \\
 0x_1 & + & 1x_2 & = & 1 \\
 0x_1 & + & 1x_2 & = & 1 \\
 0x_1 & + & 1x_2 & = & 1 \\
 1x_1 & + & 0x_2 & = & 1 \\
 0x_1 & + & 1x_2 & = & 1
 \end{array}$$

and the solutions for x_1 and x_2 are $x_1 = 1$, $x_2 = 1$. Solutions to systems of linear equations have been thoroughly studied and many algorithms are available for implementation on computers, including algorithms which evaluate the accuracy of an approximate solution when an exact solution cannot be determined. (See, e.g., Dettman, J.W., *Introduction to Linear Algebra and Differential Equations*, Dover Pubs., 1986; Press W.H. et al., *Numerical Recipes in C: The Art of Scientific Computing*, 2nd ed., Cambridge University Press, 1993; Vetterling (ed.) *Numerical Recipes in C: The Art of Scientific Computing/Disk V 2.02*, Cambridge University Press, 1997.) These methods can also be used to determine whether a set of receptor complex scent components is suitable for re-creating a given scent. For example, if the scent to be recreated is represented by the vector (1, 1, 1, 1, 1, 2), there will be no solution to the resulting system of linear equations using the two receptor complex scent components in the illustration above. In this instance, one or more additional receptor scent components will need to be identified in order to be able to re-create the scent in terms of the receptor primary scent components. Alternatively, the scent represented by (1, 1, 1, 1, 1, 1) may be an acceptable approximation to the scent represented by (1, 1, 1, 1, 1, 2). Integers are used in this example for clarity, but the vectors can contain any real number representing a measured intensity; for example, (1.1, 0.997, 1.08, 1.2, 0.88888..., 2.00001) may be an acceptable approximation to the scent represented by (1, 1, 1, 1, 1, 2).

It will be readily appreciated that the choice of a complete set of receptor primary, quasi-primary, or complex scent component chemicals (capable of generating all scents) versus a partial set of receptor primary, quasi-primary, or complex scent component chemicals (capable of generating, exactly or approximately, a subset of scents) depends on the application for which scent re-creation is desired.

A special category of receptor scent components are chemicals which bind to a receptor without activating it. If these non-activating chemicals prevent chemicals which do activate the receptors from binding, the non-activating chemicals act to "turn off" those receptors. These non-activating chemicals, or receptor binding antagonists, are particularly useful in editing scents, as they can be added to a scent to attenuate or eliminate particular aspects of the scent. In the vector example above, if a particular receptor antagonist blocks OR2, OR3, and OR4, but not OR1, OR5 or OR6, then it can be represented in vector format as (0, -1, -1, -1, 0, 0). In the reproduction of (1, 1, 1, 1, 1, 2) from the vectors (1, 0, 0, 0, 1, 0) and (0, 1, 1, 1, 0, 1), the following combination can be used:

$1 \times (1, 0, 0, 0, 1, 0) + 2 \times (0, 1, 1, 1, 0, 1) + 1 \times (0, -1, -1, -1, 0, 0)$ to yield the vector (1, 1, 1, 1, 1, 2). In some instances, enough of a particular receptor binding antagonist is used to eliminate any possibility of activation by a receptor scent component, in which case the vector entry for the receptor(s) which are blocked by that antagonist contains 0 in the vector position corresponding to that receptor(s).

Perceptive primary scents are defined as scents that give a single scent perception, for example, the scent "lemon" as perceived by a human. A perceptive primary scent can be composed of one or more receptor primary scent components, one or more receptor complex scent components, or a mixture of one or more receptor primary scent components and one or more receptor complex scent components. Since perceptive primary scents are to some extent subjective, identification of perceptive primary scents can be performed by using a panel of subjects who evaluate and describe scents. A perceptive complex scent is made up of more than one perceptive primary scent. The boundaries between a perceptive primary scent and a perceptive complex scent are also to some extent subjective; for example, one person may describe a scent as "pizza," while another person may describe the same scent as "sausage, cheese and tomato sauce." That is, one person may perceive a scent as a perceptive primary scent for "pizza," while another person may perceive the same scent as a perceptive complex scent made up of several individual perceptive primary scents. In order to standardize perceptive scents, a panel of five or more, preferably ten or more, more preferably fifty or

more, still more preferably one hundred or more, people can be surveyed to label various perceptive scents. When a plurality, preferably a majority, more preferably 66 2/3 % or greater, still more preferably 95 % or greater, even more preferably 99% or greater, of the panel identifies a scent as the same scent (e.g., of a panel of 100 people, 95 describe a scent as
5 "pizza," while the other 5 describe the scent otherwise), the scent can be labeled as a perceptive scent (the perceptive scent can be primary or complex, depending on whether the panel identifies it as a single scent or a mixture of scents).

In fields where existing classification schemes already exist, the perceptive primary and complex scents can be indexed according to those schemes. For example, the SFP (Société
10 Française des Parfumeurs) has drawn up a classification system based on 5 main groups, subdivided into classes. Such a classification can be used for selecting perceptive primary scents and used as guides for combining the scents.

Selecting Chemicals for Scent Re-creation

15 A scent which has been represented as a set of basis vectors in olfactory space can in principle be re-created simply by mixing the receptor primary scent components, receptor quasi-primary scent components, or receptor complex scent components needed to interact the olfactory receptors in the same pattern as the original scent. Such an approach requires 1) a method to generate a representation of the original scent in olfactory space, and 2) suitable
20 receptor primary scent component chemicals which can be mixed in the appropriate manner.

Identification of receptor scent components can be performed by various methods. One such method assays the interaction of candidate components with each olfactory receptor. The receptors can be expressed *in vitro* and assays can be set up to monitor the interaction of various candidate components with each individual receptor. Chemicals which interact with
25 one and only one olfactory receptor are receptor primary scent components, while chemicals which interact with more than one olfactory receptor are receptor complex scent components (and can possibly be receptor quasi-primary scent components, depending on the interaction profile it displays with the olfactory receptors). Such an approach can use methods known in the art, for example those of Breer *et al.*, Ann. N. Y. Acad. Sci. (1998) 855:175-81 or Malnic *et al.*,
30 *Cell* (1999) 96(5):713-23. Breer *et al.* expressed olfactory receptors in Sf9 cells and evaluated the second-messenger response to various odorants. Malnic *et al.* isolated olfactory neurons from mice and utilized calcium imaging to study the response of the neurons to different odorants, while using RT-PCR to determine which olfactory receptor was expressed

in the neuron under study. U.S. Patent No. 5,798,275 describes a method for evaluating interaction of compounds with members of a reference panel of proteins. WO 98/50081 discloses methods for detecting particular odorant ligand specificity for particular odorant receptors in nasal epithelium tissue of mammals such as rats and mice.

5

Selection of Receptor Primary Scents by *in silico* Methods

An alternative method utilizes *in silico* screening techniques--that is, computer simulation methods--for selecting candidate components. Protein-ligand screening can be used to select compounds which bind to particular receptors in order to identify receptor primary
10 scent components. Examples of such programs are DOCK, AutoDock, GOLD, FlexX, LUDI, GROWMOL, and HOOK. (See Wang, J., Kollman, P.A., Kuntz I.D., "Flexible ligand docking: a multistep strategy approach," *Proteins* 36(1):1-19 (1999) and references therein.) These programs function by taking a protein structure and either matching compounds of known structure to the protein structure to determine the protein-ligand interaction, or by
15 "growing" a molecule in the active site or binding site of a protein to determine what molecule will best interact with the protein.

Olfactory receptor proteins are membrane proteins, and experimental determination of the three-dimensional structures of membrane proteins has lagged the corresponding structural determination of water-soluble proteins for various reasons. However, alternative methods for
20 constructing the three-dimensional structures of proteins are available. The primary (amino acid) sequences of many olfactory receptors are known. This information can be used to model a three-dimensional structure of a receptor protein using various algorithms and computer programs known in the art. The resulting model structure can then be used as the basis for evaluating interaction of candidate components with the receptor.

25 Alternatively, given known chemical structures which give rise to a particular odor, analysis of the structures can indicate the particular portion of the chemical structure which is responsible for the odor. This is analogous to "pharmacore analysis" used in medicinal chemistry to determine the important portion of drugs.

Methods for developing compounds which bind to receptors and other proteins of
30 known structure, and determining interactions between ligands and receptors, are described in various references. The DOCK program evaluates the fit of a ligand into a protein molecule of known structure (see Gschwend, D.A., Good, A.C. and Kuntz, I.D., "Molecular Docking Towards Drug Discovery", *J. Mol. Recognition* 9, 175-86 (1996); Kuntz, I.D., Meng, E.C., and

B.K. Shoichet, "Structure-Based Strategies For Drug Design and Discovery", *Acc. Chem. Res.* 27, 117-123 (1994); and Kuntz, I.D., "Structure-based strategies for drug design and discovery", *Science* 257, 1078-1082 (1992); see also <http://www.cmpharm.ucsf.edu/kuntz/dock.html>). Using a known (or modeled) structure of an olfactory receptor, DOCK can be used to screen for compounds which bind to the receptor. The program AMBER (see Cornell, WD, Cieplak P, Bayly CI, Gould IR, Merz KM Jr, Ferguson DM, Spellmeyer DC, Fox T, Caldwell JW and Kollman PA. "A second generation force field for the simulation of proteins and nucleic acids," *Journal of the American Chemical Society* 117, 5179-5197 (1995); Computer Simulation of Biomolecular Systems, A. Wilkinson, P. Weiner, W. Van Gunsteren, eds. Volume 3, p. 83-96, P. Kollman, R. Dixon, W. Cornell, T. Fox, C. Chipot and A. Pohorille; Bayly CI, Cieplak P, Cornell WD and Kollman PA. "A well-behaved electrostatic potential based method using charge restraints for deriving atomic charges - the RESP model," *Journal of Physical Chemistry* 97(40), 10269-10280 (1993); Cornell WD, Cieplak P, Bayly CI and Kollman PA. "Application of RESP charges to calculate conformational energies, hydrogen bond energies, and free energies of solvation," *Journal of the American Chemical Society* 115(21), 9620-9631 (1993); see also <http://www.amber.ucsf.edu/amber/amber.html>) can be used to calculate more precise interaction energies between candidate ligands. Other examples of such methods are described in, for example, U.S. Patent No. 5,866,343, directed to determining the energetically favorable binding site between two molecules; U.S. Patent No. 5,854,992, a system and method for structure-based drug design which takes into account binding free energy as it "grows" candidate molecules into a receptor binding site; and U.S. Patent No. 5,495,423, which describes a method for ligand design (principally applicable to peptidic ligands).

The foregoing methods typically depend on a known three-dimensional structure for the receptor. When such a structure cannot or has not been determined experimentally, a structure can be modeled using computer algorithms. Blundell TL, Sibanda BL, Sternberg MJ, Thornton JM, "Knowledge-based prediction of protein structures and the design of novel molecules," *Nature* 326(6111):347-52 (1987); Shortle D, "Structure prediction: The state of the art," *Curr Biol* 9(6):R205-9 (1999), Morea V, Leplae R, Tramontano A, "Protein structure prediction and design," *Biotechnol Annu Rev* 4:177-214 (1998) and Onuchic JN, Luthey-Schulten Z, Wolynes PG, "Theory of protein folding: the energy landscape perspective," *Annu Rev Phys Chem* 48:545-600 (1997) address various methods of predicting protein structure from sequence data.

Various implementations for predicting protein structure from amino acid sequences are discussed in U.S. Patent Nos. 5,878,373 and 5,884,230.

If the structure, or even the identity, of the targeted receptor cannot be determined, alternative computational techniques can be used to generate information regarding possible
5 ligands which will interact with the receptor. Quantitative structure-activity relationships (QSAR; see Green, S.M. and Marshall, G.R., "3-D QSAR: A current perspective," *Trends Pharmacol Sci* 16:285 (1995); and 3D QSAR in Drug Design: Theory, Methods and Applications, Kubinyi, H. Ed.; Escom, Leiden.), including QSAR refinements such as comparative molecular field analysis (ComFA) (Cramer, R. D. et al. "Comparative Molecular
10 Field Analysis ComFA 1. Effect Of Shape On Binding Of Steroids To Carrier Proteins," *J. Am. Chem. Soc.* 110: 5959 (1988)); and pharmacophore mapping (Martin YC, Bures MG, Danaher EA, DeLazzer J, Lico I, Pavlik PA, "A fast new approach to pharmacophore mapping and its application to dopaminergic and benzodiazepine agonists," *J Comput Aided Mol Des* 7(1):83-102 (1993)) have been used to design pharmacophores that can interact with the receptor. U.S.
15 Patent No. 5,699,268 provides a method for producing computer-simulated receptors which functionally mimic biological receptors; the simulated receptors are essentially abstractions of structurally useful information from compounds which are known to interact with a receptor. U.S. Patent No. 5,901,069 describes a method of automatically refining a set of chemicals using structure/activity data. U.S. Patent No. 5,862,514 describes a method of simulating
20 synthesis of compounds of desired biological activity and evaluating their activity via further simulations.

Application of structure-function relationships to classification of odors has been described by Chastrette M., Rallet E. "Structure-minty odour relationships: Suggestion of an interaction pattern," *Flavour and Fragrance Journal*, 13(1):5-18 (1998); Chastrette M., De
25 Saint Laumer J.Y., Peyraud J.F., "Adapting the structure of a neural network to extract chemical information. Application to structure-odour relationships," *SAR QSAR Environ Res* 1 (2-3):221-231 (1993), Chastrette M., "Trends in structure-odor relationships," *SAR QSAR Environ Res* 6(3-4):215-254 (1997) and Jain et al., "A shape-based machine learning tool for drug design," *J Comput Aided Mol Des* 8(6):635-652 (1994). These methods can be useful in
30 determining the "chemical distance" between odors. For example, isoamyl acetate is typically experienced as a banana-like odor, while octyl acetate is typically experienced as an orange-like odor, which gives a measure of how the chain length of the alkoxy portion of the ester influences perception.

Olfactory Receptors and Libraries of Olfactory Receptors

The olfactory receptors of the invention can be used to analyze and describe the interaction of scent odorant molecules with each receptor. This can be done individually, receptor-by-receptor and odorant molecule by odorant molecule. However, a combinatorial approach provides a much more powerful method of analyzing and describing the interaction of scent odorant molecules with olfactory receptors.

In one embodiment, the invention comprises libraries of olfactory receptors. These libraries are used to screen compositions for interaction with receptors. A composition can be a single compound (essentially a pure chemical), or a mixture of two or more compounds or chemicals. The compositions can be presented to the library in vapor form, or in solutions, typically aqueous solutions.

The method for determining the binding pattern of a composition with olfactory receptors comprises the steps of: exposing the composition to an olfactory receptor library; and determining whether the composition binds to each olfactory receptor of the library, thereby determining the overall binding pattern of the composition. While it is desirable to determine whether the composition binds to each of the olfactory receptors, in certain cases, determining the binding pattern to a subset of the receptors is suitable. Such a situation can arise if the complete pattern is not needed, or if the experiment cannot determine binding to a receptor for a particular reason. (Determining the binding to a subset is equivalent to reducing the olfactory receptor library to that subset of receptors.)

Typically, the libraries are prepared as arrays, where the position of each olfactory receptor is known on the array. The arrays can take the form of multiwell plates, solid substrates such as chips or wafers, or any other form allowing identification of the receptor location. The arrays can be prepared in order to simply assess binding, or can be prepared in order to assess degree of activation as described above, using, for example, the technique of Malnic *et al.*, *Cell* 1999 96, 713-723. Alternatively, an *in silico* array of structures can be prepared, using the known primary structure of the receptors and the modeling techniques described above.

The libraries contain at least two olfactory receptors. In increasing order of preference, the libraries contain at least 5, 10, 20, 30, 40, 50, 75, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1500, 1600, 1800, or 2000 olfactory receptors. The

receptors are presented as ordered arrays. For example, a 96-well plate can contain 96 receptor preparations. Upon exposure to a composition, the plate can be scanned, and the response of each receptor in each well can be evaluated. This leads to a 96-element vector description of the composition in terms of those 96 olfactory receptors.

5 In one embodiment, binding to the olfactory receptors is assessed. In another embodiment, the approximate binding constant of the composition to the olfactory receptors is determined. In yet another embodiment, the degree of activation of the olfactory receptor by the composition is determined. For receptor antagonists, binding will occur, but no activation will occur; the invention embraces the identification of such
10 antagonists.

The compositions for use are varied. A set of all volatile compounds can be used. A standard set of perfumes or odorants can be used. A set of commercially used scents can be used. Sets of compounds particularly useful in the invention are disclosed in co-pending United States Patent Application Serial No. 09/620,753. However, it must be emphasized
15 that the invention is not limited to any one set or classification of compounds.

Preferred subsets of olfactory receptor polynucleotide sequences include:

SEQ ID NOS: 163, 331, 414, 425, 672, 762, 919, and 1027;

SEQ ID NOS: 809 and 1067;

SEQ ID NO: 744;

20 SEQ ID NOS: 207, 336, 441, and 615;

SEQ ID NOS: 157, 168, 197, 221, 250, 334, 340, 412, 413, 459, 491, 618, 690, 694, 759, 760, 761, 767, 819, 860, 872, 873, 917, 936, 939, 940, 947, 952, 958, 959, 1023, 1034, 1038, 1043, and 1044;

SEQ ID NOS: 783, 785, 882, 888, 922, and 925;

25 SEQ ID NOS: 707, 748, 752, 755, 756, 790, and 997;

SEQ ID NOS: 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, and 1084;

30 SEQ ID NOS: 163, 239, 331, 335, 368, 381, 385, 414, 425, 514, 572, 596, 603, 628, 638, 642, 672, 674, 689, 744, 762, 809, 835, 885, 896, 919, 920, 938, 948, 972, 999, 1007, 1014, and 1027;

SEQ ID NOS: 164, 173, 176, 180, 182, 184, 185, 188, 190, 194, 207, 210, 213, 214, 215, 217, 219, 220, 223, 226, 227, 229, 230, 234, 235, 240, 249, 255, 265, 270, 273, 274,

276, 277, 279, 281, 289, 291, 293, 294, 298, 302, 307, 311, 318, 319, 321, 330, 336, 339,
341, 342, 343, 348, 351, 356, 359, 361, 365, 366, 367, 368, 370, 372, 373, 374, 375, 376,
378, 379, 380, 382, 383, 384, 385, 388, 391, 392, 393, 398, 400, 401, 403, 408, 420, 423,
427, 428, 431, 434, 435, 438, 439, 440, 441, 447, 448, 450, 455, 458, 464, 465, 468, 471,
5 473, 474, 475, 478, 479, 481, 482, 484, 485, 492, 494, 499, 502, 508, 511, 512, 513, 515,
526, 532, 534, 541, 543, 545, 546, 550, 552, 553, 557, 558, 560, 563, 564, 568, 572, 576,
582, 583, 584, 585, 586, 588, 599, 600, 605, 606, 607, 608, 609, 610, 615, 620, 621, 631,
632, 636, 638, 640, 642, 645, 648, 650, 651, 652, 654, 656, 657, 661, 662, 664, 668, 679,
680, 686, 687, 689, 691, 696, 699, 700, 702, 706, 713, 720, 721, 723, 729, 734, 738, 745,
10 768, 772, 773, 775, 791, 798, 799, 823, 857, 898, 900, 901, 903, 914, 931, 933, 937, 941,
945, 948, 956, 965, 969, 983, 992, 993, 994, 999, 1003, 1005, 1009, 1010, 1011, 1019,
1028, 1035, 1037, 1052, 1061, 1062, and 1063

SEQ ID NOS: 157, 161, 163, 168, 197, 200, 205, 218, 221, 242, 250, 331, 334,
340, 412, 413, 414, 419, 425, 452, 453, 454, 456, 459, 462, 491, 591, 618, 622, 663, 665,
15 667, 670, 672, 690, 694, 695, 709, 759, 760, 761, 762, 767, 819, 820, 822, 826, 832, 846,
847, 860, 872, 873, 877, 881, 887, 908, 911, 913, 917, 919, 921, 936, 939, 940, 942, 944,
947, 951, 952, 955, 958, 959, 960, 964, 975, 977, 979, 986, 1023, 1027, 1034, 1038, 1043,
1044, 1049, and 1051;

SEQ ID NOS: 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 165, 166,
20 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184,
185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202,
203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220,
221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238,
240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257,
25 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275,
276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293,
294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311,
312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329,
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10 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590,
591, 592, 593, 594, 595, 597, 598, 599, 600, 601, 602, 604, 605, 606, 607, 608, 609, 610,
611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 629,
630, 631, 632, 633, 634, 635, 636, 637, 639, 640, 641, 643, 644, 645, 646, 647, 648, 649,
650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667,
15 668, 669, 670, 671, 673, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687,
688, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706,
707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724,
725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742,
743, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761,
20 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780,
781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798,
799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 810, 811, 812, 813, 814, 815, 816, 817,
818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 836,
837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854,
25 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872,
873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 886, 887, 888, 889, 890, 891,
892, 893, 894, 895, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910,
911, 912, 913, 914, 915, 916, 917, 918, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930,
931, 932, 933, 934, 935, 936, 937, 939, 940, 941, 942, 943, 944, 945, 946, 947, 949, 950,
30 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968,
969, 970, 971, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987,
988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 1000, 1001, 1002, 1003, 1004, 1005,

1006, 1008, 1009, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, and 1064;

5 and any and all combinations of the foregoing sets.

The polypeptide translation products of those polynucleotide sequences form sets of preferred olfactory receptor polypeptides, as well as any and all combinations of those polypeptide sets. The preferred sets of polypeptide translation products, and any and all combinations thereof, are also preferred sets for use as libraries of olfactory receptors for
10 scent analysis.

Scent Fingerprinting

It will be appreciated that in many instances, analysis of a scent (whether in terms of
15 receptor primary scent components, receptor quasi-primary scent components, receptor complex scent components, or other scent representations) is of great utility in and of itself, in addition to the utility of that analysis in scent re-creation. Thus, another embodiment of the invention encompasses "scent fingerprinting," which comprises analysis of a scent profile when re-creation of that scent may not be necessary or desirable. The distinction between scent
20 profiling, as defined above, and scent fingerprinting, as defined here, is that scent profiling is a representation of a scent relative to a mammalian olfactory system in such a manner as to provide useful information about the interaction of the scent with that olfactory system, such as sufficient information to enable re-creation of the scent from receptor primary scent
25 components. In contrast, scent fingerprinting can, but does not necessarily, provide such information.

Various applications and examples of scent fingerprinting can include, but are not limited to, the following illustrative situations. Natural gas is widely used as a heating and fuel supply, but is in itself odorless. Utility companies routinely add small amounts of odorants such as mercaptans to allow detection of natural gas leaks in households. Should a leak occur
30 at an unattended site, however, potentially dangerous quantities of natural gas can accumulate. In such areas, a device which can recognize odorants would be useful.

Another use of scent fingerprinting is quality control of a manufacturing process. Many food items, such as freshly-baked bread and pastries, sauces, and cheeses, have distinct

odors. A manufacturer can record a scent fingerprint for a given food item, e.g. spaghetti sauce for packaging in jars. The quality of the product can then be monitored at various stages in manufacture and storage, and deviations from the established scent fingerprint can be used to alert the manufacturer to problems in manufacture or storage. Quality control scent fingerprints
5 are not limited to food items, but can be used in any circumstance where a volatile component of an item of manufacture can be used as a quality control indicator, e.g., perfume, deodorants, solvent mixtures, etc.

While scent fingerprints need not be meaningful in terms of a mammalian olfactory system, it will be readily appreciated that a scent profile, which does represent a scent in a
10 manner relevant to an olfactory system, is a special type of scent fingerprint. Additionally, the response of a device which yields a scent fingerprint of an odor (such as the "artificial nose" described in U.S. Pat. Nos. 5,571,401, 5,698,089, 5,788,833, 5,891,398 and 5,911,872) can be calibrated against the response of a mammalian olfactory system in order to transform the scent fingerprint generated by the device into a true scent profile which can be utilized to re-create an
15 odor using receptor primary scent components, receptor quasi-primary scent components, or receptor complex scent components. The invention encompasses such data transformations.

Scent Editing

Representation of a scent as a scent profile provides the capability of editing the scent.
20 A scent profile which represents a scent in terms of perceptive primary scent components is the most straightforward representation to edit. An example is the perceptive complex primary scent of "burned pizza" comprised of perceptive primary scent components of sausage, cheese, tomato sauce, and burned dough. In order to edit the scent to provide a more pleasant re-creation, the perceptive primary scent component of burned dough would simply be eliminated.
25 Other scent profiles can be edited using a knowledge of the perception of a particular components. Using our six-receptor example, suppose that the (1, 0, 0, 0, 1, 0) receptor complex scent component is known to provide an unpleasant aspect of the scent, while the (0, 1, 1, 1, 0, 1) component is known to provide the pleasant aspect of the scent. The first complex scent component can be omitted from the edited scent profile, leaving (0, 1, 1, 1, 0, 1)
30 as the edited scent profile. (This would also alter the index values for scent re-creation, from 1 and 1, to 0 and 1.) More complex editing situations can be manipulated using computer algorithms as discussed above.

Individual scent components can be omitted, added, weakened, or intensified, and different scent components can be adjusted in different manners or degrees, depending on the desired result. The editing can be done interactively, with each edited scent emitted by the emitter module for evaluation by the user, or can be done automatically, with
 5 removal/weakening or addition/intensifying of particular components specified in advance, on either an absolute scale or relative to other components.

The following examples are presented to illustrate, but not to limit, the invention.

EXAMPLES

10 **Example 1: Isolation of human olfactory receptor cDNAs**

Total RNA was extracted from human olfactory epithelium and polyA⁺ RNA was obtained by oligo-dT selection. This RNA served as template for cDNA synthesis using reagents from the SMART cDNA Library construction kit (Clontech K1051-1; Palo Alto, CA). The Superscript IITM reverse transcriptase (Life Technologies, Gaithersburg, MD)
 15 was used for first-strand synthesis.

Double-stranded cDNA was passed through a Chroma-Spin⁺ STE-100 column (Clontech) to remove unreacted primers and cDNA fragments shorter than 100 nucleotides. The olfactory epithelial cDNA population was then subjected to amplification using primers homologous to conserved regions in GPCRs. The first primer set was homologous
 20 to transmembrane segment 2 (TM2) and the second set was homologous to TM 7.5. The TM2 primer set contained 32 oligonucleotides, representing all possible nucleotide sequences capable of encoding the TM2 amino acid sequence motif P-M-Y-F/L-F/Y-F/L, and designed to be non-degenerate at their 3' ends. Sequences of the TM2 primers are as follows:

25	CCN ATG TAY TTN CTC CTA	SEQ ID NO: 74
	CCN ATG TAY TTN CTC CTC	SEQ ID NO: 75
	CCN ATG TAY TTN CTC CTG	SEQ ID NO: 76
	CCN ATG TAY TTN CTC CTT	SEQ ID NO: 77
30	CCN ATG TAY TTN CTC TTA	SEQ ID NO: 78
	CCN ATG TAY TTN CTC TTC	SEQ ID NO: 79
	CCN ATG TAY TTN CTC TTG	SEQ ID NO: 80
	CCN ATG TAY TTN CTC TTT	SEQ ID NO: 81
	CCN ATG TAY TTN CTT CTA	SEQ ID NO: 82
35	CCN ATG TAY TTN CTT CTC	SEQ ID NO: 83
	CCN ATG TAY TTN CTT CTG	SEQ ID NO: 84

	CCN ATG TAY TTN CTT CTT	SEQ ID NO: 85
	CCN ATG TAY TTN CTT TTA	SEQ ID NO: 86
	CCN ATG TAY TTN CTT TTC	SEQ ID NO: 87
	CCN ATG TAY TTN CTT TTG	SEQ ID NO: 88
5	CCN ATG TAY TTN CTT TTT	SEQ ID NO: 89
	CCN ATG TAY TTN TTC CTA	SEQ ID NO: 90
	CCN ATG TAY TTN TTC CTC	SEQ ID NO: 91
	CCN ATG TAY TTN TTC CTG	SEQ ID NO: 92
	CCN ATG TAY TTN TTC CTT	SEQ ID NO: 93
10	CCN ATG TAY TTN TTC TTA	SEQ ID NO: 94
	CCN ATG TAY TTN TTC TTC	SEQ ID NO: 95
	CCN ATG TAY TTN TTC TTG	SEQ ID NO: 96
	CCN ATG TAY TTN TTC TTT	SEQ ID NO: 97
	CCN ATG TAY TTN TTT CTA	SEQ ID NO: 98
15	CCN ATG TAY TTN TTT CTC	SEQ ID NO: 99
	CCN ATG TAY TTN TTT CTG	SEQ ID NO: 100
	CCN ATG TAY TTN TTT CTT	SEQ ID NO: 101
	CCN ATG TAY TTN TTT TTA	SEQ ID NO: 102
	CCN ATG TAY TTN TTT TTC	SEQ ID NO: 103
20	CCN ATG TAY TTN TTT TTG	SEQ ID NO: 104
	CCN ATG TAY TTN TTT TTT	SEQ ID NO: 105

The TM7.5 primer set was designed to contain the reverse complement of all sequences capable of encoding the TM7.5 amino acid sequence motif P-F/L/I/V-I/V-F/Y-S/T-L. The sequences of the TM7.5 primers are as follows:

	YYTNGTNYTNRYNCYGATANATNATNGGRTT	SEQ ID NO: 106
	YTRTTNCKNAGNWRTANATRAANGGRTT	SEQ ID NO: 107
	TCYTTRTTNCKNAGNGWRTANAYNASNGGRTT	SEQ ID NO: 108
30	TCNTSRTTNCKNARNNSARTANATNATNGGRTT	SEQ ID NO: 109
	RTTNCKNARNNSWRTANATRAANGGRTT	SEQ ID NO: 110

Reagents and enzymes for amplification were from the Advantage cDNA amplification kit (Clontech). A primary amplification reaction was constructed as follows:

35	5 µl olfactory epithelial cDNA (10-20 µg/ml)
	5 µl 10X PCR reaction buffer (Clontech)
	1 µl TM2 primer set (10 µM)
	1 µl TM7.5 primer set (10 µM)
	1 µl dNTP mix (10 mM each dATP, dCTP, dGTP, dTTP)
40	36 µl PCR-grade H ₂ O
	1 µl Advantage polymerase mix (Clontech)

Amplification was conducted in a PE 480 thermal cycler, using 28 cycles of 95°C for 15 sec, 45°C for 45 sec and 72°C for 2 min. After cycling, the amplification mixture was treated for 1 hour at 37°C with 10 Units of BspEI and 10 Units of PstI restriction enzymes, to degrade non-specific amplification products.

5 The primary amplification products were size-fractionated by agarose gel electrophoresis, and amplification products having a length between 600 and 800 base pairs were selected for secondary amplification.

 The secondary amplification reaction was conducted identically to the primary amplification reaction, except that the size-selected primary amplification product was used
10 as template. Secondary amplification reactions containing products which generated a specific gel band of between 600 and 800 base pairs were extracted once with phenol/chloroform and once with chloroform, and nucleic acids were precipitated from the reactions by addition of 0.1 volume of 3M NaOAc (pH 4.8), 20 µg glycogen, and 1.5
15 volumes of cold 95% ethanol. The precipitate was collected by centrifugation, dried and resuspended in 15 µl distilled water. After the precipitate dissolved, 3 µl loading dye was added, and the sample was subjected to electrophoresis on a 1.0% low-melting agarose gel containing ethidium bromide. Electrophoresis was conducted at 60V for approximately
40 min, with a 1 kb marker in adjoining lanes.

 Following electrophoresis, the gel was illuminated with long-wavelength ultraviolet
20 light, and the band was excised from the gel. The gel slice was placed in a 0.5 ml tube, and the tube was heated at 68°C for 15 min. The temperature of the tube was then equilibrated at 45°C. (This is conveniently accomplished in a thermal cycler.) AgarACE™ (Promega) was then added to the tubes, according to the manufacturer's instructions, and incubation at 45°C was continued for 15 min. As a general rule, 2 µl of enzyme per 50 µl of gel slice is
25 adequate. Following AgarACE™ digestion, the digestion mixture was extracted with phenol/chloroform according to the manufacturer's instructions, and nucleic acids were precipitated by addition of 0.1 volume of 3M NaOAc (pH 4.8), 20 µg glycogen, and 1.5 volumes of cold 95% ethanol. The precipitate was collected by centrifugation, dried and resuspended in 5 µl distilled water.

30 Gel-purified amplification products were cloned using the TOPO XL PCR Cloning Kit (Invitrogen) according to the manufacturer's instructions. After cloning, individual

colonies were selected at random for nucleotide sequence analysis of the inserts, using procedures for sequence determination that are well-known to those of skill in the art.

Example 2: Use of olfactory receptor polypeptides for screening

5 Components of a scent are identified by determining the interaction between one or more potential odorant molecules and one or more OR polypeptides. For example, if a known original scent involves binding to a particular set of ORs, any subsequent set of molecules which bind to that same set of ORs and stimulate or inhibit the response of the ORs to the same extent as the original scent is capable of re-creating that original scent. If
10 each of the subsequent set of molecules interacts with one and only one OR, then the set of molecules is composed of receptor primary scent components. In similar fashion, scents which involve binding of multiple ORs can be recreated by identifying a molecule, or combination of molecules, which binds to that particular set of ORs.

 Binding of molecules to ORs is determined by a number of methods that are well-
15 known in the art including, but not limited to, in vitro and in silico methods as described herein. Binding of molecules to ORs can also be determined or approximated by using quantitative structure-activity relationships as described herein.

Example 3: Identification of agonists and antagonists of olfactory receptors

20 Interaction of an odorant with a particular OR embedded in the membrane of an olfactory neuron will activate a signaling cascade within the neuron, ultimately resulting in the perception of a particular smell. A molecule, produced for example by combinatorial chemistry, which activates a similar or identical signaling cascade, will induce the perception of the same smell. Such a molecule would be considered a OR agonist. An OR
25 agonist, once identified, can be used as a probe to identify additional agonists, as well as antagonists, of that particular OR.

 Assays for the activation and the end product(s) of signaling cascades are known in the art. For example, direct Ca^{++} imaging can be employed, using either dye -labeled Ca^{++} or dyes that are sensitive to Ca^{++} concentration. Such dyes, and techniques for their use,
30 are available from, for example, Molecular Dynamics (Sunnyvale, CA) and Molecular Probes (Eugene, OR).

Because ORs are transmembrane proteins, identification of agonists and/or antagonists for a particular OR require that the OR is present either in a living cell or in a membrane preparation.

In one embodiment of a method for the determination of OR agonists or
5 antagonists, a known OR agonist is labeled *in situ*, or is resynthesized with an attached label, and is bound to an OR. The effect of various test molecules on the binding of the labeled OR agonist is then determined. Labeling of an OR agonist is accomplished by any of a number of methods that are known to those of skill in the art including, but not limited to, various fluorescent labels (for example, chemical fluorochromes or green fluorescent
10 protein). Binding of the OR agonist is measured by any of a number of competitive binding assays, as are known in the art. A test molecule that displaces the agonist from the OR (*i.e.*, reduces the binding of the agonist) is identified as a candidate agonist or antagonist of the particular OR. In a subsequent experiment, the candidate molecule is bound to the OR, and the effect on the signaling cascade induced by the original agonist is
15 determined. A similar of higher level of activation is indicative of an agonist; while a reduced level of activation of the signaling cascade reflects the action of an antagonist.

In additional embodiments of the displacement assay, an unlabeled agonist is used, and its degree of binding is determined by mass spectrometry. *See*, for example, U.S. Patent No. 5,894,063; U.S. Patent No. 5,719,060; and Wei *et al.* (1999) *Nature* 399:243-
20 246.

In another embodiment, fluorescent microparticles ("beads"), which can be separated by flow cytometry, are used to identify OR agonists and antagonists. Such beads are available, for example, from Luminex (Austin, TX). Multiple different ORs are attached to the beads, wherein each distinct color of bead is associated with a particular
25 OR. The collection of beads, containing different ORs, is exposed to a test molecule or a collection of test molecules, such as can be synthesized by combinatorial chemistry, and binding of the test molecule(s) is determined, for example, by use of a labeled ligand of the test molecule(s). The beads are sorted according to their color by flow cytometry. Correlation of test molecule binding with bead color allows the determination of test
30 molecules capable of binding to the OR. Agonist or antagonist function of an OR binding molecule is determined by methods described *supra*.

Example 4: Summary of search parameters for homology searches

Step 1: (masking) rempolyatmask raw sequence on -NONE- [?] with remAT_moderate (15) . Continue to step 2.

5 Step 2: (masking) mask masked sequence from step 1 on RepBase [N] with mask_moderate (85) . Continue to step 3.

Step 3: (masking) mask masked sequence from step 2 on VecBase [N] with mask_moderate (85) . Continue to step 4.

Step 4: blastn masked sequence from step 3 on NR-Nuc [N] with blastn_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 5. Otherwise, stop.

10 Step 5: blastx masked sequence from step 3 on NR-Pro [P] with blastx_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 6. Otherwise, stop.

Step 6: blastn masked sequence from step 3 on GB_CurAwareness-Nuc [N] with blastn_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 7. Otherwise, stop.

15 Step 7: blastx masked sequence from step 3 on GB_CurAwareness-Pro [P] with blastx_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 8. Otherwise, stop.

Step 8: tblastx masked sequence from step 3 on NR-Nuc [N] with tblastx_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 9. Otherwise, stop.

20 Step 9: blastn masked sequence from step 3 on EST [N] with blastn_10_hits (V=10 B=10) . If the P/Z score is $> 1.0E-50$, or no hits are found go to step 10. Otherwise, stop.

Step 10: blastn masked sequence from step 3 on STS [N] with blastn_10_hits (V=10 B=10) . Stop.

25

Example 5: Summary of search results

Step	Program	Database	Score	Sequences By Best Hit's Score				No Hits	R	Not un	Finished	Not Run
1	rempolyat mask	NONE-[P]	P/Z/ E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0	0
2	mask	RepBase[N]	P/Z/ E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0	0
3	mask	VecBase[N]	P/Z/ E	0	> 1.0 >=	0	>= 1.0 >	0	74	74	0	0
4	blastn	NR-Nuc[N]	P/Z/ E	46	< 1.0E-20 <=	28		0	74	0		0
5	blastx	NR-Pro[P]	P/Z/ E	16	< 1.0E-20 <=	34		0	50	0		24
6	blastn	GB_CurAwareness-Nuc[N]	P/Z/ E	17	< 1.0E-20 <=	31		0	48	0		26
7	blastx	GB_CurAwareness-Pro[P]	P/Z/ E	13	< 1.0E-20 <=	28		2	43	0		31
8	tblastx	NR-Nuc[N]	P/Z/ E	14	< 1.0E-20 <=	29		0	43	0		31
9	blastn	EST[N]	P/Z/ E	10	< 1.0E-20 <=	33		0	43	0		31
10	blastn	STS[N]	P/Z/ E	5	< 1.0E-20 <=	33		0	38			

5

Example 6. Datamining and analysis from GenBank

Datamining. A datamining pipeline was built to detect all available OR-like sequences in the public databases and to update the results as new database versions are released. tblastn (Altschul et al., 1997) was used to compare amino acid query sequences to the non-redundant version of GenBank (partitions nt, htg and est_human, all updated to August 6th, 2000), with a non-stringent expectation value cutoff of 1e-4. The queries used included 96 curated OR sequences representing all known families (SEQ ID NO:2651 through SEQ ID NO:2747) and 249 additional HORDE entries (SEQ ID NO:2402 through SEQ ID NO:2650). In a second round 105 newly mined mouse genes (SEQ ID NO:2296 through SEQ ID NO:2401) and 344 newly mined human genes (SEQ ID NO:2009 through SEQ ID NO:2295) were used as additional queries (all datasets are available

electronically). All resulting database entries were catalogued by species and subdivided into four types: mRNA, EST, DNA and genomic, the latter including entries annotated with keyword HTGS_PHASE1-3, or with length at least 10 kb. Low-pass genomic sampling sequences were ignored (keyword HTGS_PHASE0). In addition, a set of 132 olfactory sequence tag (OST) sequences was used. All sequences used were split into contigs according to annotation or, where unavailable, according to runs of at least 50 Ns. All resulting contigs were analyzed for interspersed repeats using RepeatMasker (Smit and Green, 1997). Subcontigs were defined as segments between interspersed repeats, ignoring simple repeats and low-complexity regions.

10 *Localization of genomic clones.* The University of Santa Cruz (UCSC) Working Draft Sequence ("golden path", <http://genome.ucsc.edu>) presents a first tentative assembly of the finished and draft human genomic sequence based on the WUSTL clone map (<http://genome.wustl.edu/gsc>). The "golden path" data was used to assign a coordinate to each finished or unfinished genomic clone, in Mb from the p telomere. In parallel, the
15 Unified DataBase (UDB) was used to assign similar Mb coordinates to the clones, based on their marker contents (Chalifa-Caspi et al., 1998). The two maps are largely colinear, and were integrated based on the coordinates of clones that could be localized in both. Clones for which no coordinate could be obtained by either method were assigned a chromosome according to UDB, by sequence similarity to another mapped clone, by annotation, or by e-
20 PCR (Schuler, 1997).

Detection of OR sequences. Each subcontig was compared using FASTY (Pearson et al., 1997) to a curated set of OR protein sequences from several species, yielding a conceptual translation product. The possibility of a pseudogene being disrupted by the insertion of interspersed repeats was taken into account, with the two or more resulting
25 parts being therefore located in different subcontigs. Such compatible candidate sequences were automatically joined into a combined reconstructed pseudogene. Whenever possible, all resulting sequences were trimmed or extended to use a suitable ATG codon for initiation and to end at a stop codon, but avoiding those stop codons that yield products shorter than 275 amino acids. The sequences were finally split into OR or non-OR by comparing them
30 to previously recognized OR sequences and to a non-redundant database of non-OR GPCRs which we extracted from Swiss-Prot. To be automatically classified as an OR, a

new sequence has to be at least 40% identical over at least 100 amino acids to another OR. A more stringent cutoff (50%) was required for shorter sequences.

Definition of OR genes. A given gene could be represented in more than one overlapping genomic clone. Such redundancy was removed by considering two sequences as representing the same gene, if they are in the same chromosome, located in clones less than 300 kb apart and at least 99% identical at the nucleotide level. An exception to this rule is when two genes coappear in the same clone, in which case they were considered to be distinct genes. Sequences localized to a chromosome but without a coordinate were only compared to other sequences within that chromosome, and finally those sequences lacking a chromosomal assignment were compared to the rest, applying only the criterion of sequence similarity. For each resulting gene with more than one constituent sequence, a consensus nucleotide sequence was created after multiple alignment by ClustalW (Higgins et al., 1996) using the fast comparison parameter. This was followed by conceptual translation and end trimming to suitable start and stop codons, as above. Genes with length at least 275 amino acids without frame disruptions (frameshifts, in-frame stop codons or disrupting interspersed repeats) were considered to be full-length and apparently intact. For partial sequences without frame disruptions no statement could be made on their apparent functionality, except when the partial sequences were observed in the genome as such, in which case they were considered to be pseudogenes. Finally, each OR gene was assigned a family and subfamily by amino acid sequence similarity to previously classified OR genes.

The references cited in this example are: Altschul, S. F., Madden, T. L., Schaffer, A. A., Zhang, J., Zhang, Z., Miller, W. and Lipman, D. J. (1997) Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. *Nucleic Acids Res* 25: 3389-402; Chalifa-Caspi, V., Prilusky, J. and Lancet, D. (1998) The Unified Database. Weizmann Institute of Science, Bioinformatics Unit and Genome Center (Rehovot, Israel). World Wide Web URL: bioinformatics.weizmann.ac.il/udb; Higgins, D. G., Thompson, J. D. and Gibson, T. J. (1996) Using CLUSTAL for multiple sequence alignments. *Methods Enzymol* 266: 383-402; Pearson, W. R., Wood, T., Zhang, Z. and Miller, W. (1997) Comparison of DNA sequences with protein sequences. *Genomics* 46: 24-36; Schuler, G. D. (1997) Sequence mapping by electronic PCR. *Genome Res* 7: 541-50; and Smit, A. F.

A. and Green, P. (1997) RepeatMasker at URL: repeatmasker.genome.washington.edu/cgi-bin/RM2_req.pl.

Tables 1 and 2 contain additional information regarding SEQ ID NO. 153 to SEQ ID NO. 1085. The explanation of the entries in Tables 1 and 2 is as follows:

Symbol: The Human Genome Organization gene symbol, as allotted by a procedure to be published soon. OR = Olfactory Receptor, numeral to the immediate right - family designation, capital letters - subfamily designation, rightmost numeral - individual gene within subfamily, n appearing when such number is not assigned yet; P = Pseudogene.

10 All ORs within a family share at least 40% protein sequence identity.

All ORs within a subfamily share at least 60% protein sequence identity.

HORDE: The H serial number within the Human Olfactory Receptor Data Exploratorium (URL bioinfo.weizmann.ac.il/HORDE). The numeral 38 represents the HORDE build (version), gxxx is the individual gene number.

15 Digi: Appearance of a DSnn serial number here means that the sequence has been PCR-amplified from human olfactory epithelial cDNA using degenerate primers at the transmembrane helix 2 and transmembrane helix 7. See separate page for explanations on the analysis of the DS entries.

20 OST: OSTnnn is the serial number of the sequence in the Olfactory Sequence Tag collection in the Lancet laboratory (URL bioinfo.weizmann.ac.il/HORDE). Appearance here means that the sequence has been PCR-amplified from human genomic DNA using degenerate primers at the transmembrane helix 2 and transmembrane helix 7. There are a total of 112 OST sequences.

25 Trivial name: One or more aliases given to the same gene by different laboratories. Many of the trivial names are of the form ORnn-xx, whereby nn is a chromosome number and xx is an arbitrary numerical identifier.

Tran: (transcribed) Plus appears if the entry was sequenced from cDNA, or was found in the Expressed Sequence Tags (EST) databases. Plus also appears if in the public databases the gene was annotated as mRNA.

30 Int.: (intact) "Yes" indicates that the gene may be intact, as there are no obvious sequence frame disruptions. "Put" (putative) indicates the same, except that the known sequence is short, hence there may be disruptions in the unsequenced segments. "Pol"

indicates a polymorphism between intact and pseudogenic alleles. When no word appears, this indicates a pseudogene.

E: (Extent) FL indicates that the Full Length sequence is known (typically 310 ± 30 amino acids).

5 D: The number of sequence disruptions in the known sequence of a pseudogene.

C: The human chromosomal location of the OR gene, assigned as described under Mb coord.

Mb coord: The location of the OR gene within a human chromosome, in megabase units, beginning at the p-telomere and ending at the q-telomere, computed based on
10 integrating information from Unified Database (URL is bioinfo.weizmann.ac.il/udb) and the University of California Santa Cruz (URL is genome.ucsc.edu).

CDR: The 17 amino acids suggested to line the odorant ligand binding pocket, delineated by the extracellular 2/3 of transmembrane helices 3,4 and 5. The assignment is based on an algorithm at URL
15 bioinformatics.weizman.ac.il/HORDE/humanGenes/CDR.html.

%: (% id) The percent protein identity between the human sequence in the current line and the known rodent (rat or mouse) OR sequence to which it bears the highest similarity.

S: (Species) Rat (R) or mouse (M).

20 Acc: The Genbank accession number of the clone that contains the rodent sequence.

Range: The positions x ... y of the first and last bases within the rodent which constitute the OR coding region. If x>y then the OR is on the reverse strand.

Table 1

25

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
153	OR10D3	H38g001			HSHTPCR09			
154	OR7EnP	H38g002						FL
155	OR1D5	H38g003		OST901	OR17-31	+	pol	FL
156	OR10NnP	H38g00						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
157	OR2F1	H38g005		OST902	OLF3;OR7-139;OR7-140	+	yes	FL
158	OR7EnP	H38g006						FL
159	OR8FnP	H38g007						FL
160	OR2Q1P	H38g008			DJ0669B10;OR7-2			FL
161	OR2W1	H38g009			AL035402-B;dJ88J8.1;hs6M1-15		yes	FL
162	OR7EnP	H38g010				+		FL
163	OR6B1	H38g011	DS119		OR7-3;WUGSC:H_DJ0669B10.3	+	yes	FL
164	OR10Kn	H38g012					yes	FL
165	ORnP	H38g013				+		FL
166	OR4F2P	H38g014			HS191N21;dJ191N21.4;hs6M1-11			FL
167	OR7EnP	H38g015						FL
168	OR1F2P	H38g016			OLFMF2	+	yes	FL
169	OR2P1P	H38g017			AL035402-A;dJ88J8.2;hs6M1-26			
170	OR7E43P	H38g018		OST903	OR4-116			FL
171	OR4F1	H38g019			HSDJ0609N19			FL
172	OR7E55P	H38g020		OST904	OR2DG;OR3.2			FL
173	OR13Dn	H38g021					yes	FL
174	OR4CnP	H38g022						FL
175	OR10D1P	H38g023		OST074	HSHTPCR X03	+		FL
176	OR4Cn	H38g02					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
177	OR8GnP	H38g02 5						
178	OR13CnP	H38g02 6						FL
179	OR4CnP	H38g02 7						FL
180	OR13Cn	H38g02 8					yes	FL
181	OR4CnP	H38g02 9						
182	OR51Bn	H38g03 0					yes	FL
183	OR7E5P	H38g03 1		OST905	OR11-12			FL
184	OR13Cn	H38g03 2					yes	FL
185	OR4Sn	H38g03 3					yes	FL
186	OR51BnP	H38g03 4						FL
187	OR6JnP	H38g03 5						FL
188	OR51Bn	H38g03 6					yes	FL
189	OR7EnP	H38g03 7						FL
190	OR2An	H38g03 8					yes	FL
191	OR7E22P	H38g03 9			OR3.6;OR6DG			FL
192	OR7E4P	H38g04 0			OR11-11a			FL
193	OR7E66P	H38g04 1		OST906	OR3.3;OR3DG;hg630			FL
194	OR6Mn	H38g04 2					yes	FL
195	OR2ALnP	H38g04 3						
196	OR6MnP	H38g04 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
197	OR4D1	H38g045			AC005962-A;HSTPCR16	+	yes	FL
198	OR5D2P	H38g046		OST907	OR11-7a;OR912-91			FL
199	OR7E38P	H38g047		OST127	AC004967	+		FL
200	OR4D2	H38g048			AC005962-B		yes	FL
201	OR7E7P	H38g049			AC004967-A			FL
202	OR5AHnP	H38g050						
203	OR2U2P	H38g051			AL050339-B;dJ974I11.2;hs6M1-23			FL
204	OR2U1P	H38g052			974I11;AL050339-C;dJ974I11.3;hs6M1-24			FL
205	OR2H2	H38g053			AC006137-A;dJ271M21.2;hs6M1-12		yes	FL
206	OR2H5P	H38g054		OST616	HS271M21;hs6M1-13			FL
207	OR2In	H38g055				+	yes	FL
208	OR11HnP	H38g056						FL
209	OR7EnP	H38g057				+		
210	OR9In	H38g058					yes	FL
211	OR2AFnP	H38g059						FL
212	OR13KnP	H38g061						FL
213	OR13Cn	H38g062					yes	FL
214	OR13Fn	H38g063					yes	FL
215	OR9Qn	H38g064					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
216	OR2TnP	H38g06 5						FL
217	OR4Kn	H38g06 6					yes	FL
218	OR2B8P	H38g06 7			dJ313I6.4;hs6M1-29P		yes	FL
219	OR2Tn	H38g06 8					yes	FL
220	OR4Kn	H38g06 9					yes	FL
221	OR2A4	H38g07 0			WUGSC:H_DJ0988G15.2	+	yes	FL
222	OR7EnP	H38g07 1						FL
223	OR4Kn	H38g07 2					yes	FL
224	OR13InP	H38g07 3						FL
225	OR7EnP	H38g07 4						FL
226	OR6Jn	H38g07 5					yes	FL
227	OR4Mn	H38g07 6					yes	FL
228	OR4VnP	H38g07 7						FL
229	OR6Xn	H38g07 8					yes	FL
230	OR51Gn	H38g07 9					yes	FL
231	OR6EnP	H38g08 0						FL
232	OR4NnP	H38g08 1						FL
233	OR6MnP	H38g08 2						FL
234	OR4Nn	H38g08 3					yes	FL
235	OR4Cn	H38g08 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
236	OR4KnP	H38g08 5						FL
237	ORnP	H38g08 6						
238	OR5D3	H38g08 7		OST908	OR11-8b;OR11-8c			
239	OR2G1P	H38g08 8	DS13;D S16	OST619	dJ974I11.4;hs6M1-25	+		FL
240	OR4Kn	H38g08 9					yes	FL
241	OR8BnP	H38g09 0						FL
242	OR2B2	H38g09 1			OR6-1;dJ193B12.4		yes	FL
243	OR7EnP	H38g09 2						FL
244	OR4KnP	H38g09 3						FL
245	OR2AD1P	H38g09 4			dJ25J6.1;hs6M1-8P			FL
246	OR1AAnP	H38g09 5						FL
247	OR1E3P	H38g09 6			OR17-210			FL
248	OR8BnP	H38g09 7						FL
249	OR5Hn	H38g09 8					yes	FL
250	OR1G1	H38g09 9		OST909	OR17-130;OR17-209	+	yes	FL
251	OR5HnP	H38g10 0						FL
252	ORnP	H38g10 1						
253	ORnP	H38g10 2						
254	OR4PnP	H38g10 3						FL
255	OR13Hn	H38g10 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
256	OR7D1P	H38g10 5		OST910	CIT-B-440L2;OR19-131;OR19-A			FL
257	OR4KnP	H38g10 6						FL
258	OR7E24	H38g10 7		OST911	CIT-B-440L2;OR19-8	+		FL
259	OR51NnP	H38g10 8						FL
260	OR7E18P	H38g10 9		OST912	OR19-14;TPCR26	+		FL
261	OR7E19P	H38g11 0		OST913	HSCIT-B-440L2;OR19-7;TPCR110	+		FL
262	OR7E41P	H38g11 1		OST914	OR11-20;hg84			FL
263	OR2R1	H38g11 2		OST058				FL
264	OR10ACn P	H38g11 3						FL
265	OR51Ln	H38g11 4					yes	FL
266	OR52JnP	H38g11 5						FL
267	OR9LnP	H38g11 6						
268	OR51PnP	H38g11 7						FL
269	OR5HnP	H38g11 8						FL
270	OR51An	H38g11 9					yes	FL
271	OR5HnP	H38g12 0						FL
272	ORnP	H38g12 1						
273	OR52En	H38g12 2					yes	FL
274	OR5Hn	H38g12 3					yes	FL
275	OR4CnP	H38g12 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
276	OR52En	H38g12 5					yes	FL
277	OR10Dn	H38g12 6					yes	FL
278	OR5HnP	H38g12 7						FL
279	OR13An	H38g12 8					yes	FL
280	OR5HnP	H38g12 9						FL
281	OR5Kn	H38g13 0					yes	FL
282	OR7EnP	H38g13 1						FL
283	OR4DnP	H38g13 2						FL
284	OR2ARnP	H38g13 3						
285	OR7E29P	H38g13 4		OST032				FL
286	OR4CnP	H38g13 5						FL
287	OR5PnP	H38g13 6						FL
288	OR7EnP	H38g13 7						FL
289	OR56An	H38g13 8					yes	FL
290	OR56AnP	H38g13 9						
291	OR5Pn	H38g14 0					yes	FL
292	OR7E53P	H38g14 1		OST915	OR3-142;OR3-143			FL
293	OR5Pn	H38g14 2					yes	FL
294	OR52Ln	H38g14 3					yes	FL
295	OR5E1	H38g14 4			HSTPCR24	+		FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
296	OR56AnP	H38g14 5						
297	OR4KnP	H38g14 6						
298	OR52Ln	H38g14 7					yes	FL
299	OR7EnP	H38g14 8						
300	OR52XnP	H38g14 9						FL
301	ORnP	H38g15 0						
302	OR56An	H38g15 1					yes	FL
303	OR56AnP	H38g15 2						
304	OR1R1P	H38g15 3			OR17-1			FL
305	OR52EnP	H38g15 4						FL
306	OR51AnP	H38g15 5						FL
307	OR51An	H38g15 6					yes	FL
308	OR4CnP	H38g15 7						FL
309	OR52JnP	H38g15 8						FL
310	OR4RnP	H38g15 9						
311	OR52Jn	H38g16 0					yes	FL
312	OR4CnP	H38g16 1						FL
313	OR51AnP	H38g16 2						FL
314	OR7EnP	H38g16 3						FL
315	OR5MnP	H38g16 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
316	OR10ABn P	H38g16 5						FL
317	OR52SnP	H38g16 6						FL
318	OR5Mn	H38g16 7					yes	FL
319	OR10Sn	H38g16 8					yes	FL
320	OR5MnP	H38g16 9						FL
321	OR10Gn	H38g17 0					yes	FL
322	ORnP	H38g17 1						FL
323	OR5MnP	H38g17 2						FL
324	OR10GnP	H38g17 3						
325	OR10TnP	H38g17 4						FL
326	ORnP	H38g17 5						
327	OR10RnP	H38g17 6						FL
328	OR5MnP	H38g17 7						FL
329	OR7EnP	H38g17 8						FL
330	OR10Tn	H38g17 9					yes	FL
331	OR1E1	H38g18 0	DS37;D S43;DS 46	OST916	HGMP07I;OR17-2;OR17- 32	+	yes	FL
332	OR5BKnP	H38g18 1						
333	OR5MnP	H38g18 2						FL
334	OR3A3	H38g18 3		OST917	OR17-137;OR17- 16;OR17-201	+	yes	FL
335	OR10ADn P	H38g18 4	DS10			+		FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
336	OR1ORn	H38g18 5				+	yes	FL
337	OR5TnP	H38g18 6						FL
338	OR4GnP	H38g18 7						FL
339	OR6Yn	H38g18 8					yes	FL
340	OR1E2	H38g18 9		OST918	OR17-135;OR17-93	+	yes	FL
341	OR8Hn	H38g19 0					yes	FL
342	OR4Fn	H38g19 1					yes	FL
343	OR10Kn	H38g19 2					yes	FL
344	OR7LnP	H38g19 3						
345	OR8InP	H38g19 4						FL
346	OR10RnP	H38g19 5						
347	OR2AFnP	H38g19 6						FL
348	OR8Kn	H38g19 7					yes	FL
349	ORnP	H38g19 8						
350	OR8KnP	H38g19 9						FL
351	OR51Hn	H38g20 0					yes	FL
352	OR7EnP	H38g20 1						FL
353	ORnP	H38g20 2						
354	OR5BMnP	H38g20 3						FL
355	OR10GnP	H38g20 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
356	OR2Yn	H38g20 5					yes	FL
357	OR10DnP	H38g20 6						FL
358	OR3BnP	H38g20 7						FL
359	OR8Dn	H38g20 8					yes	FL
360	OR5RnP	H38g20 9						
361	OR10Gn	H38g21 0					yes	FL
362	OR5BDnP	H38g21 1						FL
363	OR5ALnP	H38g21 2						FL
364	OR52HnP	H38g21 3						
365	OR10Gn	H38g21 4					yes	FL
366	OR5Mn	H38g21 5					yes	FL
367	OR51Mn	H38g21 6					yes	FL
368	OR6Tn	H38g21 7	DS15;D S146;D S147			+	yes	FL
369	OR6DnP	H38g21 8						FL
370	OR4B1	H38g21 9		OST208			yes	FL
371	OR5ALnP	H38g22 0						FL
372	OR51Qn	H38g22 1					yes	FL
373	OR4Dn	H38g22 2					yes	FL
374	OR52Nn	H38g22 3					yes	FL
375	OR4Xn	H38g22 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
376	OR8Jn	H38g22 5					yes	FL
377	OR51JnP	H38g22 6						FL
378	OR10Gn	H38g22 7					yes	FL
379	OR52En	H38g22 8					yes	FL
380	OR4Xn	H38g22 9					yes	FL
381	OR10A2	H38g23 0	DS5;DS 53;DS5 6	OST363		+		FL
382	OR5Mn	H38g23 1					yes	FL
383	OR52En	H38g23 2					yes	FL
384	OR8Kn	H38g23 3					yes	FL
385	OR10An	H38g23 4	DS55			+	yes	FL
386	OR8LnP	H38g23 5						FL
387	OR5BPnP	H38g23 6						
388	OR52Nn	H38g23 7					yes	FL
389	ORnP	H38g23 8						
390	OR8JnP	H38g23 9						FL
391	OR5Mn	H38g24 0					yes	FL
392	OR52En	H38g24 1					yes	FL
393	OR5Tn	H38g24 2					yes	FL
394	OR52NnP	H38g24 3						FL
395	OR4B2P	H38g24 4		OST919	hg449			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
396	OR51KnP	H38g24 5						FL
397	OR52QnP	H38g24 6						FL
398	OR4Fn	H38g24 7					yes	FL
399	OR11MnP	H38g24 8						
400	OR52Nn	H38g24 9					yes	FL
401	OR56An	H38g25 0					yes	FL
402	OR5AWnP	H38g25 1						FL
403	OR52Nn	H38g25 2					yes	FL
404	ORnP	H38g25 3						
405	OR52EnP	H38g25 4						FL
406	OR5BHnP	H38g25 5						FL
407	OR4QnP	H38g25 6						FL
408	OR51En	H38g25 7					yes	FL
409	OR11KnP	H38g25 8						FL
410	OR12D1P	H38g25 9			AC004174- B;dJ994E9.7;hs6M1-19			FL
411	OR4NnP	H38g26 0				+		FL
412	OR11A1	H38g26 1			AC004174- A;dJ994E9.6;hs6M1-18	+	yes	FL
413	OR10C1	H38g26 2			AC004174;dJ994E9.5;h s6M1-17	+	yes	FL
414	OR2H1	H38g26 3	DS114		OLFR42A-9004-14;OR6- 2;dJ994E9.4;hs6M1-16	+	yes	FL
415	OR9RnP	H38g26 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
416	OR4FnP	H38g26 5						
417	OR7D4	H38g26 6		OST920	OR19-B;hg105			FL
418	OR7E25P	H38g26 7		OST921	CIT-B-440L2;OR19-C			FL
419	OR2D2	H38g26 8			OR11-610		yes	FL
420	OR10An	H38g26 9					yes	FL
421	OR2WnP	H38g27 0				+		
422	OR7E16P	H38g27 1		OST922	CIT-B-440L2;OR19-133;OR19-9			FL
423	OR52Pn	H38g27 2					yes	FL
424	OR6AnP	H38g27 3						FL
425	OR7D2	H38g27 4	DS70;D S73	OST923	HTPCRHO3;OR19-4	+	yes	FL
426	OR52UnP	H38g27 5						FL
427	OR2AGn	H38g27 6					yes	FL
428	OR7G3	H38g27 7		OST085			yes	FL
429	OR56BnP	H38g27 8						FL
430	OR2AGnP	H38g27 9						FL
431	OR56Bn	H38g28 0					yes	FL
432	OR6AnP	H38g28 1						FL
433	OR4FnP	H38g28 2						FL
434	OR6Wn	H38g28 3					yes	FL
435	OR4Mn	H38g28 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
436	OR52YnP	H38g28 5						
437	OR11HnP	H38g28 6						FL
438	OR9An	H38g28 7					yes	FL
439	OR5Mn	H38g28 8					yes	FL
440	OR6Vn	H38g28 9					yes	FL
441	OR4Nn	H38g29 0				+	yes	FL
442	OR51AnP	H38g29 1						FL
443	OR9PnP	H38g29 2						
444	OR4H6P	H38g29 3			OR15-71;OR15-82			FL
445	OR51FnP	H38g29 4						FL
446	OR7E1P	H38g29 5			AC004923			FL
447	OR51Tn	H38g29 6					yes	FL
448	OR2Vn	H38g29 7					yes	FL
449	OR51HnP	H38g29 8						FL
450	OR51An	H38g29 9					yes	FL
451	OR2AInP	H38g30 0						FL
452	OR2F2	H38g30 1			OR7- 1;WUGSC:H_DJ0669B10. 1		yes	FL
453	OR1F12	H38g30 2			dJ313I6.5;hs6M1-35P		yes	FL
454	OR7G1P	H38g30 3			OR19-15		yes	FL
455	OR7G2	H38g30 4		OST260			yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
456	OR1M1	H38g30 5		OST924	OR19-6		yes	FL
457	OR51UnP	H38g30 6						
458	OR52Hn	H38g30 7					yes	FL
459	OR1F1	H38g30 8		OST925	OLFMF; OR16-36; OR16- 37; OR16-88; OR16- 89; OR16-90	+	yes	FL
460	OR10PnP	H38g30 9						
461	OR4FnP	H38g31 0						FL
462	OR2T1	H38g31 1			OR1-25		yes	FL
463	OR7EnP	H38g31 2						FL
464	OR51Gn	H38g31 3					yes	FL
465	OR2Tn	H38g31 4					yes	FL
466	OR5BGnP	H38g31 5						
467	OR5WnP	H38g31 6						FL
468	OR51Sn	H38g31 7					yes	FL
469	OR5WnP	H38g31 8						
470	OR51AnP	H38g31 9						FL
471	OR5Dn	H38g32 0					yes	FL
472	OR7EnP	H38g32 1						FL
473	OR51Fn	H38g32 2					yes	FL
474	OR5Dn	H38g32 3					yes	FL
475	OR52Rn	H38g32 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
476	ORnP	H38g32 5						FL
477	OR7EnP	H38g32 6						FL
478	OR6Qn	H38g32 7					yes	FL
479	OR4Fn	H38g32 8					yes	FL
480	OR7EnP	H38g32 9						
481	OR7En	H38g33 0					yes	FL
482	OR4Nn	H38g33 1					yes	FL
483	OR2ASnP	H38g33 2						
484	OR11Hn	H38g33 3					yes	FL
485	OR2Tn	H38g33 4					yes	FL
486	OR2TnP	H38g33 5						
487	OR2AKnP	H38g33 6						FL
488	ORnP	H38g33 7						
489	OR5DnP	H38g33 8						FL
490	OR7EnP	H38g33 9						
491	OR5L2	H38g34 0			HSHTPCR16	+	yes	FL
492	OR5Dn	H38g34 1					yes	FL
493	ORnP	H38g34 2						
494	OR10Qn	H38g34 3					yes	FL
495	OR9MnP	H38g34 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
496	OR7E62P	H38g34 5		OST926	OR2-4;OR2-52;OR2- 53;OR2-75			FL
497	OR9LnP	H38g34 6						FL
498	OR7E46P	H38g34 7		OST379				FL
499	OR1S1	H38g34 8		OST034			yes	FL
500	OR5DnP	H38g34 9						
501	OR9InP	H38g35 0						FL
502	OR5Dn	H38g35 1					yes	FL
503	OR9QnP	H38g35 2						FL
504	OR51CnP	H38g35 3						
505	OR5WnP	H38g35 4						
506	OR9InP	H38g35 5						FL
507	OR51AnP	H38g35 6						FL
508	OR5L1	H38g35 7		OST262			yes	FL
509	OR7EnP	H38g35 8				+		
510	OR5BLnP	H38g35 9						
511	OR51En	H38g36 0					yes	FL
512	OR51Dn	H38g36 1					yes	FL
513	OR52In	H38g36 2					yes	FL
514	OR4KnP	H38g36 3	DS67			+		FL
515	OR52In	H38g36 4					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
516	OR4KnP	H38g36 5						FL
517	OR52MnP	H38g36 6						FL
518	ORnP	H38g36 7						
519	ORnP	H38g36 8						
520	ORnP	H38g36 9						FL
521	ORnP	H38g37 0						
522	ORnP	H38g37 1						
523	ORnP	H38g37 2						
524	ORnP	H38g37 3						
525	ORnP	H38g37 4						
526	OR6Pn	H38g37 5					yes	FL
527	OR7EnP	H38g37 6						FL
528	ORnP	H38g37 7						
529	OR7EnP	H38g37 8						FL
530	ORnP	H38g37 9						
531	OR10XnP	H38g38 0						FL
532	OR10Zn	H38g38 1					yes	FL
533	OR6KnP	H38g38 2						FL
534	OR6Kn	H38g38 3					yes	FL
535	OR1FnP	H38g38 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
536	OR1ABnP	H38g38 5						
537	OR52MnP	H38g38 6						FL
538	OR1XnP	H38g38 7						FL
539	OR4FnP	H38g38 8						
540	OR52MnP	H38g38 9						FL
541	OR2Vn	H38g39 0					yes	FL
542	OR2V1P	H38g39 1		OST265				FL
543	OR2Zn	H38g39 2					yes	FL
544	OR52KnP	H38g39 3				+		
545	OR10Hn	H38g39 4					yes	FL
546	OR2Dn	H38g39 5					yes	FL
547	OR7EnP	H38g39 6						
548	OR11GnP	H38g39 7						FL
549	ORnP	H38g39 8						
550	OR11Gn	H38g39 9					yes	FL
551	OR11HnP	H38g40 0						FL
552	OR6Kn	H38g40 1					yes	FL
553	OR11Hn	H38g40 2					yes	FL
554	OR6KnP	H38g40 3						
555	OR11HnP	H38g40 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
556	OR6KnP	H38g40 5						FL
557	OR6Kn	H38g40 6					yes	FL
558	OR2Ln	H38g40 7					yes	FL
559	OR4GnP	H38g40 8						
560	OR6Nn	H38g40 9					yes	FL
561	OR2LnP	H38g41 0						
562	OR9A1	H38g41 1			HSHTPCRX06			
563	OR6Nn	H38g41 2					yes	FL
564	OR10Hn	H38g41 3					yes	FL
565	OR7EnP	H38g41 4						FL
566	OR2AQnP	H38g41 5						
567	OR2LnP	H38g41 6						FL
568	OR5ARn	H38g41 7					yes	FL
569	OR7EnP	H38g41 8						FL
570	OR10AA n P	H38g41 9						FL
571	OR10JnP	H38g42 0						FL
572	OR5A1P	H38g42 1	DS69;D S71;DS 128;DS 129	OST181		+	yes	FL
573	OR2AHnP	H38g42 2						FL
574	OR10JnP	H38g42 3						FL
575	OR56BnP	H38g42						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		4						
576	OR5M1	H38g42 5		OST050			yes	FL
577	OR52WnP	H38g42 6						
578	OR5AMnP	H38g42 7						FL
579	OR52BnP	H38g42 8						FL
580	OR5MnP	H38g42 9						FL
581	OR5APnP	H38g43 0						FL
582	OR56Bn	H38g43 1					yes	FL
583	OR5APn	H38g43 2					yes	FL
584	OR52Bn	H38g43 3					yes	FL
585	OR9Gn	H38g43 4					yes	FL
586	OR52Kn	H38g43 5					yes	FL
587	OR5MnP	H38g43 6						FL
588	OR52Kn	H38g43 7					yes	FL
589	OR52KnP	H38g43 8				+		FL
590	OR52BnP	H38g43 9						FL
591	OR2B6P	H38g44 0			OR6-31		yes	FL
592	OR2WnP	H38g44 1						FL
593	OR2AnP	H38g44 2						FL
594	ORnP	H38g44 3						
595	OR2LnP	H38g44 4						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
596	OR2W2P	H38g44 5	DS148		dJ313I6.2;hs6M1-30P	+		FL
597	OR2LnP	H38g44 6						
598	OR2B7P	H38g44 7			dJ313I6.3;hs6M1-31P			FL
599	OR2Ln	H38g44 8					yes	FL
600	OR5BFn	H38g44 9					yes	FL
601	OR2LnP	H38g45 0						FL
602	OR7EnP	H38g45 1						
603	OR1H1	H38g45 2	DS122	OST26		+		FL
604	ORnP	H38g45 3						
605	OR4Dn	H38g45 4					yes	FL
606	OR1Ln	H38g45 5					yes	FL
607	OR5AXn	H38g45 6					yes	FL
608	OR5An	H38g45 7					yes	FL
609	OR5AYn	H38g45 8					yes	FL
610	OR13Gn	H38g45 9					yes	FL
611	OR5BBnP	H38g46 0						
612	OR9GnP	H38g46 1						FL
613	OR2TnP	H38g46 2						FL
614	ORnP	H38g46 3						FL
615	OR1Jn	H38g46 4				+	yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
616	OR2CnP	H38g46 5						FL
617	OR9GnP	H38g46 6						FL
618	OR2C1	H38g46 7			OLFmf3	+	yes	FL
619	OR51AnP	H38g46 8						
620	OR9Gn	H38g46 9					yes	FL
621	OR52Bn	H38g47 0					yes	FL
622	OR1K1	H38g47 1			hg99		yes	FL
623	OR51RnP	H38g47 2						FL
624	OR7EnP	H38g47 3						FL
625	OR52PnP	H38g47 4						FL
626	OR7EnP	H38g47 5						FL
627	OR7EnP	H38g47 6						
628	OR4KnP	H38g47 7	DS66		OR21-1	+		FL
629	OR4KnP	H38g47 8			OR21-2			FL
630	OR7EnP	H38g47 9						
631	OR51In	H38g48 0					yes	FL
632	OR51In	H38g48 1					yes	FL
633	OR2AnP	H38g48 2						
634	OR2A2	H38g48 3		OST008				FL
635	OR2AnP	H38g48 4						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
636	OR2Gn	H38g48 5					yes	FL
637	OR2AnP	H38g48 6						
638	OR6Fn	H38g48 7	DS20;D S21;DS 23;DS2 7;DS28 ;DS39; DS40;D S113;D S126;D S135;D S137;D S138;D S139;D S140;D S141;D S145			+	yes	FL
639	OR2AnP	H38g48 8						
640	OR2Gn	H38g48 9					yes	FL
641	OR7E37P	H38g49 0			hg533	+		FL
642	OR5AVn	H38g49 1	DS4;DS 6;DS11			+	yes	FL
643	OR2AJnP	H38g49 2						FL
644	OR13EnP	H38g49 3						FL
645	OR2Cn	H38g49 4					yes	FL
646	OR2TnP	H38g49 5						
647	OR2WnP	H38g49 6						
648	OR13Jn	H38g49 7					yes	FL
649	OR6RnP	H38g49 8						FL
650	OR5ATn	H38g49 9					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
651	OR2Zn	H38g50 0					yes	FL
652	OR4Ln	H38g50 1					yes	FL
653	OR4UnP	H38g50 2						FL
654	OR4Fn	H38g50 3					yes	FL
655	OR4FnP	H38g50 4						FL
656	OR4Fn	H38g50 5					yes	FL
657	OR4Fn	H38g50 6					yes	FL
658	OR4AnP	H38g50 7						FL
659	OR4LnP	H38g50 8						FL
660	OR7E33P	H38g50 9		OST927	hg688			FL
661	OR2Cn	H38g51 0					yes	FL
662	OR4Kn	H38g51 1					yes	FL
663	OR5U1	H38g51 2			bA150A6.4;hs6M1-28		yes	FL
664	OR4Kn	H38g51 3					yes	FL
665	OR5V1	H38g51 4			bA150A6.2;hs6M1-21		yes	FL
666	OR4QnP	H38g51 5						FL
667	OR12D3	H38g51 6			bA150A6.1;hs6M1-27		yes	FL
668	OR4Kn	H38g51 7					yes	FL
669	OR51CnP	H38g51 8						
670	OR1J2	H38g51 9		OST044	hg152		yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
671	OR5BJnP	H38g52 0						
672	OR1J1	H38g52 1	DS130	OST928	hg32	+	yes	FL
673	OR13En	H38g52 2					put	
674	OR4KnP	H38g52 3	DS1			+		FL
675	OR1LnP	H38g52 4						
676	OR2CnP	H38g52 5						
677	OR4TnP	H38g52 6						FL
678	OR5BnP	H38g52 7						
679	OR4Kn	H38g52 8					yes	FL
680	OR11Ln	H38g52 9					yes	FL
681	OR7E68P	H38g53 0		OST929	OR912-108;OR912- 109;OR912-110;OR912- 46;hg523;hg674			FL
682	OR7EnP	H38g53 1						FL
683	OR7E31P	H38g53 2		OST016;O ST205				FL
684	OR7EnP	H38g53 3						FL
685	OR5AKnP	H38g53 4						FL
686	OR5AKn	H38g53 5					yes	FL
687	OR5AKn	H38g53 6					yes	FL
688	OR5BQnP	H38g53 7						
689	OR1Nn	H38g53 8	DS136; DS142			+	yes	FL
690	OR1J4	H38g53 9		OST930	HSHTPCRX01	+	yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
691	OR1Nn	H38g54 0					yes	FL
692	OR2AnP	H38g54 1						FL
693	OR2ANnP	H38g54 2						
694	OR5K1	H38g54 3			HSHTPCR10	+	yes	FL
695	OR2K2	H38g54 4			HSHTPCR06		yes	FL
696	OR8Hn	H38g54 5					yes	FL
697	ORnP	H38g54 6						
698	OR4AnP	H38g54 7						
699	OR4An	H38g54 8					yes	FL
700	OR6Sn	H38g54 9					yes	FL
701	OR4RnP	H38g55 0						
702	OR13Cn	H38g55 1					yes	FL
703	OR13DnP	H38g55 2						FL
704	OR7EnP	H38g55 3						FL
705	OR10PnP	H38g55 4						FL
706	OR8In	H38g55 5					yes	FL
707	OR8G1	H38g55 6			HSTPCR25	+	put	
708	ORnP	H38g55 7						
709	OR5F1	H38g55 8			OR11-10		yes	FL
710	OR5FnP	H38g55 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
711	OR6BnP	H38g56 0						FL
712	OR2D1	H38g56 1			hg27		put	
713	OR5ASn	H38g56 2					yes	FL
714	OR5SnP	H38g56 3						FL
715	OR5AQnP	H38g56 4						
716	OR6BnP	H38g56 5						FL
717	OR5JnP	H38g56 6						FL
718	OR9AnP	H38g56 7						FL
719	OR5BEnP	H38g56 8						FL
720	OR9An	H38g56 9					yes	FL
721	OR8Hn	H38g57 0					yes	FL
722	OR5BNnP	H38g57 1						
723	OR8Jn	H38g57 2					yes	FL
724	OR9NnP	H38g57 3						
725	OR7EnP	H38g57 4						FL
726	OR7E9P	H38g57 5		OST289				FL
727	OR8KnP	H38g57 6						
728	OR2AnP	H38g57 7						
729	OR8Kn	H38g57 8					yes	FL
730	OR7E39P	H38g57 9		OST931	hg611			

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
731	OR7E27P	H38g58 0		OST932	hg616			
732	OR2Hn	H38g58 1					put	
733	OR13CnP	H38g58 2						FL
734	OR13Cn	H38g58 3					yes	FL
735	OR2S1P	H38g58 4		OST611				FL
736	OR2AMnP	H38g58 5						
737	OR1N1	H38g58 6		OST933	OR1-26		put	
738	OR2S2	H38g58 7		OST715			yes	FL
739	OR7E26P	H38g58 8			OR1-51; OR1-72; OR1-73; OR912-95			
740	OR1F11	H38g58 9			hg91		put	
741	OR5ACnP	H38g59 0						FL
742	OR5B10P	H38g59 1			OR13-34; OR13-64; OR13-67			
743	OR2AnP	H38g59 2						FL
744	OR1E5	H38g59 3	DS117; DS143		OR13-66	+	put	
745	OR4Fn	H38g59 4					yes	FL
746	OR5CnP	H38g59 5						
747	OR2WnP	H38g59 6						
748	OR2L2	H38g59 7			HSHTPCRHO7	+	put	
749	OR4H8P	H38g59 8			OR14-58			
750	OR5D10P	H38g59 9			OR912-94			

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
751	OR7A12P	H38g60 0			OR14-11;OR14-59			
752	OR2L1	H38g60 1			HSHTPCR02	+	put	
753	OR2F3P	H38g60 2			OR14-60		put	
754	OR4H10P	H38g60 3		OST934	OR15-69;OR15- 80;OR15-81			
755	OR5H1	H38g60 4			HSHTPCR14	+	put	
756	OR2K1	H38g60 5			HSHTPCR17	+	put	
757	OR7E11P	H38g60 6			OR11-2			
758	OR7A3P	H38g60 7		OST935	OR11-7b			
759	OR6A1	H38g60 8			OR11-55	+	yes	FL
760	OR5I1	H38g60 9			OLF1	+	yes	FL
761	OR2H3	H38g61 0			HUMORLMHC	+	yes	FL
762	OR10J1	H38g61 1	DS3;DS 14		HSHGMP07J	+	yes	FL
763	OR7E3P	H38g61 2			OR11-9			
764	OR1D6P	H38g61 3			OR11-13;OR11-22			
765	OR5D10P	H38g61 4			OR18-17;OR18- 42;OR18-43;OR18-44			
766	OR5D5P	H38g61 5			OR18-79;OR912-47			
767	OR52A1	H38g61 6			HPFH1OR	+	yes	FL
768	OR2AEn	H38g61 7					yes	FL
769	OR6LnP	H38g61 8						FL
770	OR6LnP	H38g61 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
771	OR7MnP	H38g62 0						
772	OR13Cn	H38g62 1					yes	FL
773	OR13Cn	H38g62 2					yes	FL
774	OR2InP	H38g62 3				+		
775	OR4An	H38g62 4					yes	FL
776	OR2InP	H38g62 5				+		
777	OR4AnP	H38g62 6						FL
778	OR4AnP	H38g62 7						FL
779	OR8C1P	H38g62 8			OR11-175			
780	OR4AnP	H38g62 9						FL
781	OR7E15P	H38g63 0			OR11-392			
782	OR10A1	H38g63 2			OR11-403		put	
783	OR2An	H38g63 3				+	put	
784	OR7EnP	H38g63 4				+		FL
785	OR7En	H38g63 5				+	put	
786	OR51A1P	H38g63 6			HPFH6OR	+		FL
787	OR7E47P	H38g63 7			HSORBPL41;bpl41-16	+		FL
788	OR5B5P	H38g63 8			OR3-144;OR912-92			
789	OR1F10	H38g63 9			OR3-145		put	
790	OR8G2	H38g64 0			HSTPCR120	+	put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
791	OR1Sn	H38g64 1					yes	FL
792	OR4AnP	H38g64 2						FL
793	OR4AnP	H38g64 3						FL
794	OR4AnP	H38g64 4						FL
795	OR4AnP	H38g64 5						FL
796	OR4AnP	H38g64 6						FL
797	OR4AnP	H38g64 7						FL
798	OR4An	H38g64 8					yes	FL
799	OR4An	H38g64 9					yes	FL
800	OR7E42P	H38g65 0		OST001				
801	OR2M3P	H38g65 1		OST003				
802	OR4H11P	H38g65 2			OR4-114;OR4-115;OR4-119			
803	OR7E57P	H38g65 3		OST007				
804	OR2B1P	H38g65 4			OR5-40;OR5-41		put	
805	OR7E34P	H38g65 5		OST011				
806	OR7E56P	H38g65 6		OST013				
807	OR3AnP	H38g65 7						
808	OR4H5P	H38g65 8			OR5-39;OR5-84			
809	OR1En	H38g65 9	DS47;D S115;D S120;D S121;D S123;D			+	put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
			S125					
810	OR51CnP	H38g66 0						
811	OR2WnP	H38g66 1						FL
812	OR51B1P	H38g66 2			AF149710			FL
813	OR7E81P	H38g66 3		OST021				
814	OR7E44P	H38g66 4		OST022				
815	OR5B7P	H38g66 5			OR6-55;OR6-57			
816	OR7E36P	H38g66 6		OST024				
817	OR2A5	H38g66 7			OR7-138;OR7-141		put	
818	OR5B1P	H38g66 8		OST936	OR8-122;OR8-123			
819	OR8B8	H38g66 9			HSTPCR85	+	yes	FL
820	OR8B4P	H38g67 0			AC002556-D		yes	FL
821	ORnP	H38g67 1						FL
822	OR8B3	H38g67 2			AC002556-B		yes	FL
823	OR2Bn	H38g67 3					yes	FL
824	OR8B6P	H38g67 4			AC002556-G			FL
825	OR8B5P	H38g67 5			AC002556-A			FL
826	OR4E2	H38g67 6			AE000658-A		yes	FL
827	OR8B7P	H38g67 7			AC002556-F			FL
828	OR11JnP	H38g67 8						FL
829	OR4E1P	H38g67 9			AE000658			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
830	OR10DnP	H38g68 0						
831	ORnP	H38g68 1						
832	OR8D2	H38g68 2			AC002556-E		yes	FL
833	OR11InP	H38g68 3						FL
834	OR11JnP	H38g68 4						FL
835	OR10AnP	H38g68 5	DS12;D S65			+		FL
836	OR8C3P	H38g68 6			OR912-106;OR912- 45;pDJ9j14			FL
837	OR2DnP	H38g68 7						FL
838	OR4PnP	H38g68 8						
839	OR7E21P	H38g68 9		OST035	OR4DG			
840	OR2M1	H38g69 0		OST037			put	
841	OR7AnP	H38g69 1						
842	OR5D11P	H38g69 2			OR8-125;OR8-127			
843	OR7E50P	H38g69 3			OR8-126			
844	OR7E45P	H38g69 4		OST049				
845	OR7E77P	H38g69 5		OST060				
846	OR8B2	H38g69 6			AC002556-C		yes	FL
847	OR8D1	H38g69 7		OST004	pDJ9j14		yes	FL
848	OR8B1P	H38g69 8		OST937	OR11-561			FL
849	OR7A1P	H38g69 9		OST938	OLF4p;OR19-3;hg513			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
850	OR7E8P	H38g70 0			OR11-11a;pDJ392a17			FL
851	OR4DnP	H38g70 1						FL
852	OR7E80P	H38g70 2		OST939	pDJ392a17			FL
853	OR4DnP	H38g70 3						FL
854	OR7E10P	H38g70 4			AC000385-A			FL
855	OR10B1P	H38g70 5			AC003956-A;OR19-19			FL
856	OR2InP	H38g70 6				+		
857	OR4Dn	H38g70 7					yes	FL
858	OR5ACn	H38g70 8					put	
859	OR2I1	H38g70 9			AC004179- A;dJ271M21.7;hs6M1- 14	+		
860	OR10H1	H38g71 0			AC004510	+	yes	FL
861	OR7E59P	H38g71 1		OST119				
862	OR7E28P	H38g71 2		OST128				
863	OR5B3	H38g71 3		OST129			put	
864	OR2A6	H38g71 4		OST182			put	
865	OR6Cn	H38g71 5					put	
866	OR7E54P	H38g71 6		OST185				
867	OR7E48P	H38g71 7		OST193				
868	OR67AnP	H38g71 8						FL
869	OR4DnP	H38g71 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
870	OR4CnP	H38g72 0						FL
871	OR4DnP	H38g72 1						FL
872	OR10H2	H38g72 2			AC004597-A	+	yes	FL
873	OR10H3	H38g72 3			AC004597-B	+	yes	FL
874	OR55CnP	H38g72 4						
875	OR55BnP	H38g72 5						
876	OR52VnP	H38g72 6						FL
877	OR2B3	H38g72 7			OR6- 4;dJ80I19.1;hs6M1-1		yes	FL
878	OR52TnP	H38g72 8						FL
879	OR2J1P	H38g72 9			OR6- 5;dJ80I19.2;hs6M1-4			FL
880	OR52HnP	H38g73 0						FL
881	OR2J3	H38g73 1			OR6- 6;dJ80I19.7;hs6M1-3		yes	FL
882	OR52An	H38g73 2				+	put	
883	OR4Qn	H38g73 3					put	
884	OR52BnP	H38g73 4						FL
885	OR2N1P	H38g73 5	DS9		OR6- 7;dJ80I19.3;hs6M1-2	+		FL
886	OR51EnP	H38g73 6				+		
887	OR2J2	H38g73 7			OR6- 8;dJ80I19.4;hs6M1-6		yes	FL
888	OR2In	H38g73 8				+	put	
889	OR2J4P	H38g73 9			OR6- 9;dJ80I19.5;hs6M1-5			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
890	OR7E40P	H38g74 0		OST215				
891	OR2H4P	H38g74 1			OR6- 3;dJ80I19.6;hs6M1-7			FL
892	OR7E52P	H38g74 2		OST245				
893	OR2InP	H38g74 3				+		
894	OR6C1	H38g74 4		OST267			put	
895	OR7E30P	H38g74 5		OST339				
896	OR5BAnP	H38g74 6	DS132			+		
897	OR7H1P	H38g74 7		OST940	CIT-B-440L2			FL
898	OR5B2	H38g74 8		OST073			yes	FL
899	OR5AZnP	H38g74 9						FL
900	OR5Bn	H38g75 0					yes	FL
901	OR52Bn	H38g75 1					yes	FL
902	OR5BnP	H38g75 2						FL
903	OR52Dn	H38g75 3					yes	FL
904	OR7A11	H38g75 4		OST527	CIT-HSP-87m17			FL
905	OR5BnP	H38g75 5						FL
906	OR51AnP	H38g75 6						FL
907	OR7A15P	H38g75 7		OST941	CIT-HSP-87m17;OR19- 1;OR19-134;OR19-146			FL
908	OR7C2	H38g75 8			CIT-HSP-87m17;OR19- 18		yes	FL
909	OR7E23P	H38g75 9		OST942	OR21-3			FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
910	OR2E1	H38g76 0			HS29K1;HSNH0569I24;hs6M1-9			
911	OR1I1	H38g76 1			F20569;OR19-20		yes	FL
912	OR1RnP	H38g76 2						FL
913	OR4F3	H38g76 3			AC004908		yes	FL
914	OR2AEn	H38g76 4					yes	FL
915	OR2InP	H38g76 5				+		
916	OR52AnP	H38g76 6				+		
917	OR7C1	H38g76 7		OST943	CIT-HSP-146e8;OR19-5;TPCR86	+	yes	FL
918	OR2A3P	H38g76 8			AC004889-B			FL
919	OR7A5	H38g76 9	DS8;DS19;DS61;DS68;DS112	OST944	HTPCR2	+	yes	FL
920	OR2InP	H38g77 0	DS72			+		
921	OR7A10	H38g77 1		OST027	CIT-HSP-146e8		yes	FL
922	OR2An	H38g77 2				+	put	
923	OR2M2	H38g77 3		OST423			put	
924	OR7A8P	H38g77 4		OST042	OR19-11;hg83			FL
925	OR2An	H38g77 5				+	put	
926	OR7E20P	H38g77 6		OST516				
927	OR2AnP	H38g77 7				+		
928	OR5BHnP	H38g77 8				+		
929	OR1En	H38g77					put	

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
930	OR1EnP	H38g78 0						
931	OR5Bn	H38g78 1					yes	FL
932	OR8RnP	H38g78 2						
933	OR5ANn	H38g78 3					yes	FL
934	OR5ANnP	H38g78 4						FL
935	OR5BRnP	H38g78 5						FL
936	OR2A1	H38g78 6			AC004889-A	+	yes	FL
937	OR10An	H38g78 7					yes	FL
938	OR2A9	H38g78 8	DS149		HSDJ0798C17	+		FL
939	OR2A7	H38g78 9			HSDJ0798C17	+	yes	FL
940	OR10A3	H38g79 0			HSHTPCR12	+	yes	FL
941	OR10Cn	H38g79 1					yes	FL
942	OR7A2P	H38g79 2			OLF4p;OR19-18;hg1003		yes	FL
943	OR10WnP	H38g79 3						FL
944	OR7A17	H38g79 4			HSHTPCR19		yes	FL
945	OR5Bn	H38g79 5					yes	FL
946	OR5BnP	H38g79 6						FL
947	OR1Q1	H38g79 7		OST226	HSTPCR106;OR9- A;hRPK-465_F_21	+	yes	FL
948	OR2Hn	H38g79 8	DS133; DS144; DS150			+	yes	FL
949	OR7EnP	H38g79						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
950	OR7A14	H38g800		OST945	OR19-12			
951	OR1B1	H38g801			OR9-B;hRPK-465_F_21		yes	FL
952	OR12D2	H38g802			AC004171;dJ994E9.8;hs6M1-20	+	yes	FL
953	OR7EnP	H38g803						FL
954	OR8BnP	H38g804						FL
955	OR1L1	H38g805			OR9-C;hRPK-465_F_21;hg23		yes	FL
956	OR11An	H38g806					yes	FL
957	OR7AnP	H38g807						
958	OR1C1	H38g808			HSTPCR27	+	yes	FL
959	OR1D2	H38g809		OST946	OR17-4	+	yes	FL
960	OR1L3	H38g810			OR9-D;hRPK-465_F_21		yes	FL
961	OR12DnP	H38g811						FL
962	OR4G1P	H38g812			OLB			FL
963	OR2B4P	H38g813			AL050339-A;dJ974I11.1;hs6M1-22			
964	OR11H1	H38g814			OR22-1		yes	FL
965	OR4Fn	H38g815					yes	FL
966	OR56AnP	H38g816						FL
967	OR8NnP	H38g817						FL
968	OR7EnP	H38g818						
969	OR4Pn	H38g81					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
		9						
970	OR6Cn	H38g82 0					put	
971	OR5BCnP	H38g82 1						
972	OR10QnP	H38g82 2	DS64			+		FL
973	OR5BnP	H38g82 3						FL
974	OR10PnP	H38g82 4						FL
975	OR1L4	H38g82 5		OST046	OR9-E;hRPK-465_F_21		yes	FL
976	OR2APnP	H38g82 6						
977	OR1L6	H38g82 7		OST947	HShRPK-465_F_21;hg16		yes	FL
978	OR6UnP	H38g82 8						FL
979	OR5C1	H38g82 9			OR9-F;hRPK-465_F_21		yes	FL
980	OR11InP	H38g83 0						FL
981	OR4AnP	H38g83 1						FL
982	OR4GnP	H38g83 2						FL
983	OR10Vn	H38g83 3					yes	FL
984	OR4G2P	H38g83 4			HS14a-1-B			FL
985	OR10VnP	H38g83 5				+		
986	OR4F4	H38g83 6			HS14a-1-A		yes	FL
987	OR4G3P	H38g83 7			OLC-7501			FL
988	OR5AKnP	H38g83 8						FL
989	OR10YnP	H38g83 9						FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
990	OR4GnP	H38g84 0						FL
991	ORnP	H38g84 1						
992	OR4Fn	H38g84 2					yes	FL
993	OR8A1	H38g84 3		OST025			yes	FL
994	OR8Bn	H38g84 4					yes	FL
995	OR6DnP	H38g84 5						
996	OR7E14P	H38g84 6		OST948	OR11-5	+		FL
997	OR2M4	H38g84 7		OST710	HSHTPCR18	+	put	
998	OR4WnP	H38g84 8						
999	OR4Fn	H38g84 9	DS36			+	yes	FL
1000	OR7EnP	H38g85 0						
1001	OR4GnP	H38g85 1						FL
1002	OR10JnP	H38g85 2						
1003	OR52En	H38g85 3					yes	FL
1004	OR4RnP	H38g85 4						FL
1005	OR4Cn	H38g85 5					yes	FL
1006	OR4AnP	H38g85 6						
1007	OR4AnP	H38g85 7	DS54			+		
1008	OR4AnP	H38g85 8						FL
1009	OR9Gn	H38g85 9					yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1010	OR10An	H38g86 0					yes	FL
1011	OR4Cn	H38g86 1					yes	FL
1012	OR10VnP	H38g86 2						
1013	OR10UnP	H38g86 3						FL
1014	OR7E2P	H38g86 4	DS127		OR11-6;hg94	+		FL
1015	OR7E35P	H38g86 5		OST018				FL
1016	OR9KnP	H38g86 6						
1017	OR7E13P	H38g86 7		OST949	OR11-4			FL
1018	OR7EnP	H38g86 8						FL
1019	OR9Kn	H38g86 9					yes	FL
1020	ORnP	H38g87 0						FL
1021	OR7EnP	H38g87 1		OST950	OR11-1;hg500	+		FL
1022	OR7EnP	H38g87 2						FL
1023	OR3A4P	H38g87 3		OST951	OR17-24;OR17-25	+	yes	FL
1024	OR8QnP	H38g87 4						
1025	OR7EnP	H38g87 5						FL
1026	OR7EnP	H38g87 6						FL
1027	OR3A1	H38g87 7	DS2		OLFRA03;OR17-40;hg138	+	yes	FL
1028	OR5Gn	H38g87 8					yes	FL
1029	OR5MnP	H38g87 9						

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1030	OR7EnP	H38g88 0						FL
1031	OR5G1P	H38g88 1		OST952	OR11- 104;OR93;OR93Hum			FL
1032	OR5PnP	H38g88 2						FL
1033	OR10AEn P	H38g88 3						
1034	OR3A2	H38g88 4		OST953	OR17-228	+	yes	FL
1035	OR10Jn	H38g88 5					yes	FL
1036	OR1D3P	H38g88 6		OST954	OR17-23			FL
1037	OR10Jn	H38g88 7					yes	FL
1038	OR1D4	H38g88 8			OR17-30	+	yes	FL
1039	OR5GnP	H38g88 9						FL
1040	OR4SnP	H38g89 0						FL
1041	OR5GnP	H38g89 1						FL
1042	OR9HnP	H38g89 2						FL
1043	OR1A1	H38g89 3			OR17-7	+	yes	FL
1044	OR1A2	H38g89 4			OR17-6	+	yes	FL
1045	OR8AnP	H38g89 5						FL
1046	OR1P1P	H38g89 6			OR17-208	+		FL
1047	OR7E12P	H38g89 7		OST955	AC000378-A;OR11- 3;hg1058	+		FL
1048	OR4A1P	H38g89 8			OR11-30			FL
1049	OR10G3	H38g89 9			AE000658-D		yes	FL

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1050	OR10G1P	H38g90 0			AE000658-C			FL
1051	OR10G2	H38g90 1			AE000658-B		yes	FL
1052	OR5Tn	H38g90 2					yes	FL
1053	OR7EnP	H38g90 3						FL
1054	OR7EnP	H38g90 4						FL
1055	OR4AnP	H38g90 5						FL
1056	OR4C1	H38g90 6			HSHTPCR11	+		FL
1057	OR1EnP	H38g90 7						
1058	OR7KnP	H38g90 8						FL
1059	OR4CnP	H38g90 9						FL
1060	OR1RnP	H38g91 0						FL
1061	OR5AUn	H38g91 1					yes	FL
1062	OR4Cn	H38g91 2					yes	FL
1063	OR4Cn	H38g91 3					yes	FL
1064	OR13DnP	H38g91 4						FL
1065	OR5n	H38g91 5	DSU116			+		
1066	OR2Hn	H38g91 6	DSU150			+		
1067	ORn	H38g91 7	DSU151			+	put	
1068	ORn	H38g91 8	DSU17			+		
1069	ORn	H38g91 9	DSU18			+		

SEQ ID #	Symbol	HORDE	Digi	OST	Trivial	Tran	Int.	E
1070	ORn	H38g92 0	DSU35			+		
1071	OR6Fn	H38g92 1	DSU41			+		
1072	ORn	H38g92 2	DSU49			+		
1073	ORn	H38g92 3	DSU50			+		
1074	OR10An	H38g92 4	DSU57			+		
1075	ORn	H38g92 5	DSU58			+		
1076	OR2Ln	H38g92 6	DSU59			+		
1077	OR10Jn	H38g92 7	DSU60			+		
1078	OR1Kn	H38g92 8	DSU63			+		
1079	OR10Dn	H38g92 9	DSU7			+		
1080	ORn	H38g93 0	DSU32			+		
1081	OR2Ln	H38g93 1	DSU38			+		
1082	ORn	H38g93 2	DSU62			+		
1083	ORn	H38g93 3	DSU48			+		
1084	OR2n	H38g93 4	DSU111			+		

Table 2

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SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
153	OR10D3	0	11	137.96SDVISV	69	M	AC074177.4	12106 ... 13038
154	OR7EnP	4	4	11.58	MVACGVLDLHIIDSFAL	53	R	AF091580.1	7 ... 663
155	OR1D5	0	17	3.75	LVVTNLLYLLLLTGIFT	49	M	AF073967.1	2 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
156	OR10Nn P	4	11	138.02	LQSGGVVHILFGNVLAT	82	M	AC074177.4	159287 ... 158526
157	OR2F1	0	7	148.62	LLGGFTSSVQIISSLLT	56	M	AF073974.1	41 ... 649
158	OR7EnP	7	4	11.58	MAGGELLDLHILPALGL	54	M	AF073989.1	547 ... 1515
159	OR8FnP	6	11	137.96	LLVICEMGAHCVC SNIF	75	M	AC069561.1 0	51687 ... 50743
160	OR2Q1P	2	7	148.62	LLCGFSANMEIVSGVIL	49	M	AC020865.3	190954 ... 189954
161	OR2W1	0	6	33.74	LMGSCMINVLLVLGIVT	88	M	AF102516.1	52 ... 669
162	OR7EnP	7	4	11.58	MVACGVLDLHITHSFGL	53	R	AF091580.1	7 ... 663
163	OR6B1	0	7	148.62	LIMCCGIIAKFDLAIFF	61	M	NM_010983. 1	178 ... 975
164	OR10Kn	0	1	154.34	MLGSSACVVTLILGALI	79	M	AC073778.1	168744 ... 167803
165	ORnP	13	11	138.02	VPYCIGGHLICLSLSS	33	M	AC074177.4	12106 ... 13038
166	OR4F2P	4	6	186.49	IHGGMVLHFQFVNSICG	50	M	AB030896.1	1 ... 906
167	OR7EnP	3	4	11.58	MVACGVLDLHIIDSFGL	54	M	AF102536.1	22 ... 669
168	OR1F2P	0	16	6.15	MSADNGVNLHLIEAVTT	72	R	M64377.1	1 ... 939
169	OR2P1P	7	6	33.74	FGGSCMSNQSALVRXSV	48	M	NM_008762. 1	1 ... 936
170	OR7E43 P	5	4	5.57	MAGGELFDLHIMPAFGL	54	M	AF102536.1	22 ... 669
171	OR4F1	4	6	0.23	IHGGMVLHFQFVNSICG	50	M	AB030896.1	1 ... 906
172	OR7E55 P	5	3	89.94	MAGDEFLDLHILPAFGL	53	M	AF073989.1	547 ... 1515
173	OR13Dn	0	9	86.89	MLGSCWITLQLMTNSLI	61	M	AC023789.5	371264 ... 372220
174	OR4CnP	3	16		AHGAIVGHIQFVNSICL	74	M	AF102522.1	40 ... 660
175	OR10D1 P	1	11	137.96	LHGCCGFQFLLGSVMPS	83	M	AC074177.4	128803 ... 129726
176	OR4Cn	0	16		LHGGIVGHVQLVNSICL	86	M	AB030895.1	1 ... 924

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
177	OR8GnP	0	11	137.96	LSAICGLGIHFVLSNIM	73	M	AC074177.4	106297 ... 105361
178	OR13CnP	2	9	86.85	MFGACGGNLQLMASFLG	82	M	AJ251154.1	2703 ... 1747
179	OR4CnP	5	16		LHEAIVLHIQFINSCL	61	M	AF102522.1	40 ... 660
180	OR13Cn	0	9	86.81	MLGTCGINVQFMATFIT	69	M	AJ133425.1	61 ... 1014
181	OR4CnP	0	16		LHGGIMGHIQLVNSMCL	63	M	AB030895.1	1 ... 924
182	OR51Bn	0	11		AHSVSGRSPVRPLITIL	76	M	AF071080.2	15931 ... 16851
183	OR7E5P	2	11	51.76	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
184	OR13Cn	0	9	86.77	MFGSCVSNVQLMSNFL	71	M	AJ251154.1	2703 ... 1747
185	OR4Sn	0	16		LHGGIAAHLQLVNSISA	56	M	AB030895.1	1 ... 924
186	OR51BnP	4	11		VHYPEWRSPPPPLVIFL	72	M	AF071080.2	15931 ... 16851
187	OR6JnP	1	14	2.72	CFGTFFGSFPLDLSVIC	50	R	M64378.1	1 ... 933
188	OR51Bn	0	11		SHAISGRSPISPQTTVL	76	M	AF071080.2	26330 ... 27262
189	OR7EnP	2	11	71.8	MFACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
190	OR2An	0	6	144.32	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
191	OR7E22P	3	3	89.94	MVACDVLDLHIIDSFGL	56	M	AF073989.1	547 ... 1515
192	OR7E4P	2	11	71.8	IVACDVLDLHIMHSFGL	55	M	AF102536.1	22 ... 669
193	OR7E66P	9	3	89.94	MAGGELLFLHIMPAFGL	55	M	AF073989.1	547 ... 1515
194	OR6Mn	0	11	138.18	TFGTFGGSFPVNLVIS	50	M	NM_010991.1	1 ... 939
195	OR2ALnP	11	11	112.69	ILGTCASNFDFFNHLLL	32	M	AL359352.1	85325 ... 86251
196	OR6MnP	2	11	138.18	TGGTFGGSCPVNLSILT	50	M	NM_010991.1	1 ... 939
197	OR4D1	0	17	60.7	IHGGVAGHVQLMNSLVI	90	M	AC019272.4	62255 ... 61317
198	OR5D2P	3	11	51.09	LCVVTTWCTLFTSANES	48	M	AC073947.3	29192 ... 30115

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
199	OR7E38P	7	7	95.91	MAGGELFHLHIMPAFGL	55	R	AF091580.1	7 ... 663
200	OR4D2	0	17	60.7	IHGGVAGHVQLKNSLDV	89	M	AC019272.4	183633 ... 182701
201	OR7E7P	4	7	95.91	MIACGVLDLHIIDSFGL	56	R	AF091580.1	7 ... 663
202	OR5AHnP	0	19	68.97	.....RSGIMC	77	M	AC020957.2	48184 ... 49107
203	OR2U2P	5	6	33.53	LVYSCIVNIPYTMCIIV	49	M	AC044846.2	105668 ... 104736
204	OR2U1P	2	6	33.53	LVCTCMINILCCVVIFA	54	M	AF102516.1	52 ... 669
205	OR2H2	0	6	33.19	ILGTCVIEVQSVASILV	89	M	AL078630.1	41097 ... 40165
206	OR2H5P	7	6	33.19	FLGTCVIEVQSMASILV	84	M	AL078630.1	41097 ... 40165
207	OR2In	0	6	33.19	LLGSCASNAQLMARILL	74	M	AL078630.1	151152 ... 150391
208	OR11HnP	5	13		IFNTCLCWIPCLSVIG	60	M	AF121972.1	171 ... 1109
209	OR7EnP	6			AAACDVIDLHITHSFGL	56	M	AF073964.1	41 ... 649
210	OR9In	0	11	54.06	FTAGCGCGLRCIFGVIA	50	R	AF091579.1	7 ... 663
211	OR2AFnP	11	X	140.17	MLGTCGHVTLAGISTLL	43	R	L34074.1	73 ... 1011
212	OR13KnP	5	X	140.17	MFGMCVIIHLLGIGTLL	43	R	L34074.1	73 ... 1011
213	OR13Cn	0	9	86.77	MFGSCVSNVQLLSNFL	68	M	AJ251154.1	2703 ... 1747
214	OR13Fn	0	9	86.77	MLGSCGTTVESMISLLM	55	M	AJ133428.1	61 ... 1017
215	OR9Qn	0	11	54.08	FTGSCGASVRSIFAVIA	47	M	AF146372.1	509 ... 1456
216	OR2TnP	1	1	254.77	ILIGFGGDMMLVMCCMLI	71	M	AF102527.1	22 ... 669
217	OR4Kn	0	14	0.08	IHVGMIVHSHFTNSISS	56	M	AF259072.1	104176 ... 105099
218	OR2B8P	0	6	31.6	LLGCTINLQLLVSILV	62	R	L34074.1	73 ... 1011

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
219	OR2Tn	0	1	254.77	MLAGVALDLLITCCMLT	57	M	AF102527.1	22 ... 669
220	OR4Kn	0	14	0.08	IHTGIAMHSQFMTSIAS	53	M	AF259072.1	104176 ... 105099
221	OR2A4	0	6	144.76	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
222	OR7EnP	6	2	161.53	MVACDVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
223	OR4Kn	0	14	0.08	MHGGILVHSQFMTSIAV	57	M	AF259072.1	104176 ... 105099
224	OR13InP	6	9	86.85	MYGSCVLNNVIGKTLL	41	M	AJ251155.1	15491 ... 16423
225	OR7EnP	8	2	161.53	MVACDVLDLHIFFDFGL	54	M	AF073989.1	547 ... 1515
226	OR6Jn	0	14	2.72	CFGTFFGSFPLDLVIC	50	R	M64378.1	1 ... 933
227	OR4Mn	0	14	0.08	LHGAMLGHIQLMSSISV	54	M	AC019272.4	183633 ... 182701
228	OR4VnP	10	11	51.09	IHGIIVLHFQMVNSFAV	50	M	AB030896.1	1 ... 906
229	OR6Xn	0	11	138.36	AFGTFSVICQLGATVIG	46	M	AF106007.1	178 ... 975
230	OR51Gn	0	11	3.7	LHSSSSRLPLLGVVTVV	55	M	NM_013617.1	1 ... 921
231	OR6EnP	3	14	2.72	SFGTFCTLIPLGIASLG	82	M	NM_010991.1	1 ... 939
232	OR4NnP	2	14	0.08	LHGGGAGHIQLMNSMTL	54	M	AC019272.4	62255 ... 61317
233	OR6MnP	7	11	138.18	IFGTFGGARLVXSMTV	37	R	M64378.1	1 ... 933
234	OR4Nn	0	14	0.08	LHGGGAGHIQLMNSMTL	57	M	AC019272.4	62255 ... 61317
235	OR4Cn	0	11	51.09	LHGGIGGHIQFVNSMCA	65	M	AF102522.1	40 ... 660
236	OR4KnP	4	14	0.08	IHAGMGTHSQFMDSMGT	51	M	AF259072.1	104176 ... 105099
237	ORnP	8	11	137.59	AIAITVVVAHAAAGVVA	35	M	AC069559.8	73704 ... 74636
238	OR5D3	0	11	51.15	FCVVTAWCTYFISANES	46	R	U50948.1	34 ... 978
239	OR2G1P	6	6	33.53	LLGSCVSNIQVLASLLL	84	M	AL359352.1	85325 ... 86251

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
240	OR4Kn	0	14	0.08	IHTGMIVHSQFINSLS	51	M	AF259072.1	104176 ... 105099
241	OR8BnP	2	11	137.59	LCVFSGMGAHNIVIGIV	68	M	AC069559.8	120212 ... 119283
242	OR2B2	0	6	31.47	LLGSCASNQLWLISFLI	89	R	L34074.1	73 ... 1011
243	OR7EnP	3	2	73.87	MVACDVLRLRIIDSFGL	54	M	AF073989.1	547 ... 1515
244	OR4KnP	3	14	0.08	IHTGIVVHSQFMTSIAI	57	M	AB030896.1	1 ... 906
245	OR2AD1 P	6	6	33.87	FLGACTSSIVLVFGFLV	51	M	AL136158.1 4	162423 ... 161461
246	OR1AAn P	8	X	140.17	MIVDNTIVLHLIIGVII	48	M	AC068902.1 1	144125 ... 143193
247	OR1E3P	1	17	2.99	MLGVSLHLHLMMGILI	74	R	M64392.1	1 ... 942
248	OR8BnP	3	11	137.59	FCVFSGMGAHNIVVGIV	63	M	AC069561.1 0	96653 ... 95690
249	OR5Hn	0	3	104.18	FAGTCFGHIHLVLSIQF	55	R	AF091575.1	52 ... 663
250	OR1G1	0	17	2.99	LMVMAAMHLHLITGTGI	56	R	M64392.1	1 ... 942
251	OR5HnP	2	3	104.18	FAVTCGGHIHFVFSIQF	46	M	AC068904.1 5	165039 ... 165965
252	ORnP	5	X	140.17	MLVTCSHHFLSFTGIWS	36	R	U50948.1	34 ... 978
253	ORnP	11	X	140.17	LIVTFAKITTTQDHHHH	29	M	AC069561.1 0	127636 ... 126698
254	OR4PnP	2	11	51.09	LHGDIAGHSQLVNSISL	51	M	AB030895.1	1 ... 924
255	OR13Hn	0	X	140.17	TLATCTTVAMLITSTLL	47	M	AJ251154.1	35662 ... 36615
256	OR7D1P	5	19	11.38	VMAGTAIFVHLLATLGF	64	R	AF091580.1	7 ... 663
257	OR4KnP	2	18	47.77	IHNIGIVVHSQFMTSIAI	55	M	AB030896.1	1 ... 906
258	OR7E24	1	19	11.38	MVACDLIDLHIIMGFGL	60	R	AF091580.1	7 ... 663
259	OR51Nn P	2	11	3.6	LHGFSARSPSLGVLVTV	49	R	AF079864.1	632 ... 1576
260	OR7E18 P	6	19	11.38	VAGCDLLDLHIMLAFGL	59	M	AF102536.1	22 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
261	OR7E19 P	2	19	11.38	MYVCDVLNLHIMDSFGL	58	M	AF073989.1	547 ... 1515
262	OR7E41 P	7	11	14.36	IVVCDMLDLHIHSTFGL	55	M	AF073989.1	547 ... 1515
263	OR2R1	3	7	148.69	LLGGFVVNMELISSVLV	77	M	AF073974.1	41 ... 649
264	OR10AC nP	7	7	148.69	MVGGCGRVGLLLACLL	46	M	AC073778.1	168744 ... 167803
265	OR51Ln	0	11	3.79	LHTFSARVPTLGVVTLV	54	R	AF079864.1	632 ... 1576
266	OR52Jn P	3	11	3.79	MHTGSSRLPILGVALDA	57	M	AF121979.1	53 ... 1106
267	OR9LnP	9	8	45.22	TVVNNFFFFFFFIFDLIA	37	M	AC069561.1 0	147203 ... 146274
268	OR51Pn P	4	11	3.79	MHSISARLPALGVVSM	48	M	AF071080.2	2641 ... 1697
269	OR5HnP	4	3	104.18	FAVTCLGHIHFFFSIQL	50	R	AF091575.1	52 ... 663
270	OR51An	0	11	3.79	EHSVSVKLPPTYFGCLV	48	R	AF079864.1	632 ... 1576
271	OR5HnP	6	3	104.18	FAVTCLGHIHFVFSIQF	46	M	AC068904.1 5	165039 ... 165965
272	ORnP	11	17	17.43	LLPCILSIIALYYYYYY	27	M	AL359352.1	9138 ... 8177
273	OR52En	0	11	3.79	MHTGSARFPFFYCAILF	57	M	AF121979.1	53 ... 1106
274	OR5Hn	0	3	104.18	FVVTCLGHIHFVFAVQF	53	R	AF091575.1	52 ... 663
275	OR4CnP	3	11	50.21	VHRGVVGHIIQFVNSICL	73	M	AF102522.1	40 ... 660
276	OR52En	0	11	3.79	MHTLSGRFPPLYCANLF	60	M	AF121979.1	53 ... 1106
277	OR10Dn	0	11	138	LHGCGGIHILLGNVLSI	86	M	AC074177.4	12106 ... 13038
278	OR5HnP	2	3	104.18	FVVTCLGHIHFVFAIQF	54	R	AF091575.1	52 ... 663
279	OR13An	0	10	47.91	LTASLALNIHLIADYGV	67	M	AF102520.1	16 ... 669
280	OR5HnP	2	3	104.18	FGGTCLGHIHILLSIQF	57	R	AF091575.1	52 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
281	OR5Kn	0	3	104.47	FCETCGAHIHLFSVQF	45	M	AC069559.8	36251 ... 35322
282	OR7EnP	9	21	17.99	MAGGELFHLQIMPAFGL	57	M	AF073989.1	547 ... 1515
283	OR4DnP	6	8	77.48	IHGGVAGHVQVMNSLVI	87	M	AC019272.4	62255 ... 61317
284	OR2ARn P	0	3	30.89	MLGSC.....	71	M	AJ251154.1	56533 ... 57369
285	OR7E29 P	4	3	136.03	MAGGELLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
286	OR4CnP	3	11	51.12	AHGAIVGHIQFVNSICL	74	M	AF102522.1	40 ... 660
287	OR5PnP	2	11	6.93	LVGTCVGNTFCPSSIIV	74	M	AF121977.1	262 ... 1197
288	OR7EnP	5	3	136.04	MVACGVLDLHIIGSFGL	52	R	AF091580.1	7 ... 663
289	OR56An	0	11	4.73	MNLPSFRLPILQAGLLS	41	M	AF121975.1	50 ... 1012
290	OR56An P	9	11	4.73	KNQAFFRMPILQGGLLS	73	M	AF121981.1	89 ... 475
291	OR5Pn	0	11	6.89	LAATCVAISYSLSSIIV	63	M	AF121977.1	262 ... 1197
292	OR7E53 P	5	3	136.04	MAGGEFPDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
293	OR5Pn	0	11	6.89	LVGTCMGNTFCPSSIIA	83	M	AF121977.1	262 ... 1197
294	OR52Ln	0	11	4.73	MHSSSVRLPFLGMAVIL	59	M	AF121976.2	474 ... 1307
295	OR5E1	3	11	6.89	LGATXGYNIQLLFSNLG	51	R	U50948.1	34 ... 978
296	OR56An P	3	11	4.73	MNLASFRMAILPPPPPP	39	M	AF121976.2	474 ... 1307
297	OR4KnP	2	8	88.25	IHTGMIVHSQFIDS...	57	M	AB030896.1	1 ... 906
298	OR52Ln	0	11	4.73	MHSSSVRLPFLGVAVVL	59	M	AF121976.2	474 ... 1307
299	OR7EnP	1	4	74.82	MVF.....	55	R	AF091580.1	7 ... 663
300	OR52Xn P	5	11	4.73	MHSASLXLSFLAVALGG	51	M	AF121976.2	474 ... 1307
301	ORnP	13	4	74.82	STGCKGRKXLKLVDFQ	24	R	M64386.1	130 ... 975
302	OR56An	0	11	4.73	MNLTSFRVPVLQAGLLS	84	M	AF121981.1	89 ... 475

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
303	OR56AnP	10	11	4.73	LI...GMMXNL...KKK	60	M	AF121981.1	89 ... 475
304	OR1R1P	5	17	3	MVGISAVHLHLIEGVVA	48	M	AF073967.1	2 ... 649
305	OR52EnP	2	11	3.79	MHTGSGRSPFLYGAILF	64	M	AF121979.1	53 ... 1106
306	OR51AnP	4	11	3.7	EHTVALKLPLLGA GSTL	46	R	AF079864.1	632 ... 1576
307	OR51An	0	11	3.7	EHSVSVKLPFTYFGCLV	48	R	AF079864.1	632 ... 1576
308	OR4CnP	1	11	51.12	VHGGVVGHVQFVNSICL	75	M	AF102522.1	40 ... 660
309	OR52JnP	9	11	3.79	MHTGACRFPI LGVVYLN	58	M	AF121979.1	53 ... 1106
310	OR4RnP	9	11	51.12	.....GGGVXSVNGNYL	66	M	AF102522.1	40 ... 660
311	OR52Jn	0	11	3.79	MHTGACRLPMLGVVFN	58	M	AF121976.2	474 ... 1307
312	OR4CnP	3	11	51.12	VHGGGVGHIQFINSICL	76	M	AF102522.1	40 ... 660
313	OR51AnP	2	11	3.79	EHSASAKLPFTYFVTGL	83	M	AF121985.1	2 ... 478
314	OR7EnP	15	12	93.55	IVVCDLLDLHIHSTFGL	55	M	AF073989.1	547 ... 1515
315	OR5MnP	2	11	52.17	CIVLHVYLMERMVASNQ	54	M	AF102528.1	52 ... 669
316	OR10ABnP	1	11	6.93	MLASCAVFCITILSVLG	47	M	AC073778.1	168744 ... 167803
317	OR52SnP	2	11	3.79	MHSTSARLPHLSVATGV	54	M	AF121976.2	474 ... 1307
318	OR5Mn	0	11	52.14	CIVHIFYTAAWMLANFY	49	R	AF091579.1	7 ... 663
319	OR10Sn	0	11	138.1	LHASCIIHIHLSIVAG	61	M	AF259072.1	32953 ... 32000
320	OR5MnP	4	11	52.14	CIVHIFYTTAWMLANFY	48	R	AF091579.1	7 ... 663
321	OR10Gn	0	11	138.1	LHGSCGSHVQLIDIVAG	61	M	AF259072.1	55611 ... 54658
322	ORnP	20	11	29.15	ILGIYEGSAHYFTILFL	33	M	AL365337.1	192661 ... 191711
323	OR5MnP	2	11	52.19	CIVIIYGYSMEWMVANLS	54	M	AF102528.1	52 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
324	OR10GnP	10	11	138.1	LYGSCWGHLPYVIKFT	30	M	L14567.1	17 ... 667
325	OR10TnP	1	1	154.34	LVACCACTIVLILSVLV	57	M	X92969.1	8035 ... 8961
326	ORnP	16	11	52.17	LAAPLLLVLVLAASAAA	33	R	M64376.1	1 ... 999
327	OR10RnP	11	1	154.5	MLAVFTICVFLIGGALV	47	M	AC023611.2	108224 ... 107271
328	OR5MnP	2	11	52.16	CIVHLVYTMWVMVANFY	49	R	AF091579.1	7 ... 663
329	OR7EnP	4	8	6.68	MLACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
330	OR10Tn	0	1	154.27	LLACCLTIVALLLSVIV	58	M	AC012302.5	54283 ... 55224
331	OR1E1	0	17	3.04	MLGDSLLHLHLIMGILI	83	R	Y07557.1	1 ... 942
332	OR5BKnP	4	12	42.11	STGGAI AIMDFLSQWGL	46	M	AF073965.1	2 ... 643
333	OR5MnP	3	11	52.17	CIVHIVYTMWVMVANLF	48	R	AF091579.1	7 ... 663
334	OR3A3	0	17	3.06	LHAGCACNTHALAAMAA	49	M	AF073967.1	2 ... 649
335	OR10ADnP	1	12	42.11	TFGVCTFNFLIIDAVIS	44	M	AF247657.1	1 ... 945
336	OR10Rn	0	1	154.5	MLAICAGATVLICGVLV	56	M	AC073778.1	168744 ... 167803
337	OR5TnP	4	11	51.94	MCGTCAAHIHAFFVIEV	51	M	AF121977.1	262 ... 1197
338	OR4GnP	15	7	0.23	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
339	OR6Yn	0	1	154.5	LVVCYGCTIKFDLAVII	61	M	NM_010983.1	178 ... 975
340	OR1E2	0	17	3.15	MLSDDLHLHLIMGILI	80	R	Y07557.1	1 ... 942
341	OR8Hn	0	11	51.94	MVGACGINVNWILATLV	51	M	NM_013728.1	1 ... 948
342	OR4Fn	0	7	0.23	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
343	OR10Kn	0	1	154.27	MLGCSACVILILCVLI	83	M	AC073778.1	168744 ... 167803
344	OR7LnP	11	X	140.17	MLGVCGHGTNLXFFFFI	32	M	AL133160.1	63932 ... 64759
345	OR8InP	7	11	51.94	MVVCCMINVSVSLATLG	44	R	M64386.1	130 ... 975

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
346	OR10Rn P	0	1	154.5	MLAVCTSIVGFIFGVLV	54	M	AC073778.1	168744 ... 167803
347	OR2AFn P	11	X	140.17	MLGTCGHVTLAGISTLL	43	R	L34074.1	73 ... 1011
348	OR8Kn	0	11	51.94	LEIILVYVFLKIFSRLF	55	M	AF102528.1	52 ... 669
349	ORnP	7	10	127.57	S.CCCLLTYYIIHHHHHH	31	M	AC020958.1	164590 ... 163746
350	OR8KnP	10	11	51.94	MIIILYQMVKIFSRLF	35	M	AC073945.4	152209 ... 153150
351	OR51Hn	0	11	3.6	MHGISSRVPVLGVVTL	49	R	AF079864.1	632 ... 1576
352	OR7EnP	5	3	136.03	MVACGVLDLHIIDSFGL	51	M	AF073989.1	547 ... 1515
353	ORnP	8	3	56.17	LLLLFLIEQH.....I	32	R	M64376.1	1 ... 999
354	OR5BMn P	20	3	103.93	KXNKCTLSSSLMVFIQF	30	M	AF146372.1	509 ... 1456
355	OR10Gn P	0	11	138.1	LHGCGGHFQFTDILAT	63	M	AF259072.1	55611 ... 54658
356	OR2Yn	0	5	209.23	LLGSCAANIQLMARVVV	74	M	AC044846.2	139468 ... 138536
357	OR10Dn P	1	11	138.1	LHGCGGHVLLSNVVAM	66	M	AC074177.4	128803 ... 129726
358	OR3BnP	7	X	158.48	IHAPSILNTYLLSFVAA	37	M	AL136158.1 4	29455 ... 30402
359	OR8Dn	0	11	138.1	LCVICAVDIHCIIGNMA	62	R	X80671.1	203 ... 1129
360	OR5RnP	0	11	52.13	LLMICVYVFHIIIFADMS	68	M	AF102528.1	52 ... 669
361	OR10Gn	0	11	138.1	LHGSCGSHVQLINIVAG	58	M	AF259072.1	55611 ... 54658
362	OR5BDn P	12	11	53.74	MTGTVCVVIHRALSSITP	39	M	NM_013728. 1	1 ... 948
363	OR5ALn P	1	11	52.13	VIVVLSYVVQALIANTC	52	M	AC073947.3	29192 ... 30115
364	OR52Hn P	3	11	4.15	LHFVSGRVPCLVPTVT	59	M	AF121975.1	50 ... 1012
365	OR10Gn	0	11	138.1	LHGGCSSHVQLITVVAG	56	M	AF259072.1	55611 ... 54658

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
366	OR5Mn	0	11	52.17	CIVHIVYTMWVMVANLF	52	M	AF146372.1	509 ... 1456
367	OR51Mn	0	11	4.15	MHSFSIRAPILGVVTVL	50	M	NM_013617.1	1 ... 921
368	OR6Tn	0	11	138.1	SFGTFAAWCPLALSVLG	52	M	NM_010991.1	1 ... 939
369	OR6DnP	5	10		SLGSFVVLGLKALVVLT	69	R	AF034903.1	85 ... 1053
370	OR4B1	0	11	45.36	IHGVI GGHIQVVSFSF	62	M	AF102522.1	40 ... 660
371	OR5ALnP	4	11	52.13	VISVVG YMIQALIANVC	50	M	AF146372.1	509 ... 1456
372	OR51Qn	0	11	4.15	FHSFSACAPSLGLAIIV	49	M	NM_013617.1	1 ... 921
373	OR4Dn	0	11	138.1	LHGGIAGHVQLMNNVTM	63	M	AC019272.4	62255 ... 61317
374	OR52Nn	0	11	4.58	MHTGSLRLPSLGVAIGF	52	M	NM_013619.1	118 ... 969
375	OR4Xn	0	11	45.36	MHGGAI GHGQLINGISV	58	M	AB030896.1	1 ... 906
376	OR8Jn	0	11	52.03	LLIVVLYTVVYVSANVG	77	M	X89682.1	2 ... 472
377	OR51JnP	2	11	4.15	MHSMSIKLPLLGI VTF L	46	M	AF071080.2	15931 ... 16851
378	OR10Gn	0	11	138.1	LHGSCSSHVQLIDIVAG	60	M	AF259072.1	55611 ... 54658
379	OR52En	0	11	4.58	MHTGTVRLPFLGVIIID	66	M	AF121979.1	53 ... 1106
380	OR4Xn	0	11	45.36	LHGGIIGHAQLINGLSI	64	M	AB030895.1	1 ... 924
381	OR10A2	1	11	5.69	MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
382	OR5Mn	0	11	52.14	CIVHV VYVICWMIANFY	49	R	AF091579.1	7 ... 663
383	OR52En	0	11	4.58	MHTGSVRF PFLISVVG I	59	M	AF121979.1	53 ... 1106
384	OR8Kn	0	11	51.94	LLIGLIYILVKIFADLS	53	M	AF146372.1	509 ... 1456
385	OR10An	0	11	5.66	MFGACASVVQWAATFIF	89	M	AF247657.1	1 ... 945
386	OR8LnP	3	11	52.13	LIVVMSYVLQ LLLANTF	51	M	AF102528.1	52 ... 669
387	OR5BPnP	8	11	52.82	VVVVVGGSIVPPVGLHL	43	R	U50948.1	34 ... 978
388	OR52Nn	0	11	4.58	MHTGSARLPFLGVAIGF	54	M	AF121976.2	474 ... 1307

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
389	ORnP	7	11	45.36	WWWIALLR.AAAAAK	28	M	X89686.1	32 ... 472
390	OR8JnP	1	11	51.94	LLIVILQTTVCVFSNLF	99	M	X89682.1	2 ... 472
391	OR5Mn	0	11	52.24	CIVIFVYNSQLMVATLS	50	R	AF091579.1	7 ... 663
392	OR52En	0	11	4.58	MHTVSIRMPLLSILL	66	M	AF121979.1	53 ... 1106
393	OR5Tn	0	11	51.94	VCGTCAAHIALFVIEV	52	M	AF146372.1	509 ... 1456
394	OR52Nn P	5	11	4.58	MHTGSVQLPFLGAAIGF	51	M	NM_013619. 1	118 ... 969
395	OR4B2P	6	11	45.36	IFGIIGRHVQVNSELS	53	M	AB030896.1	1 ... 906
396	OR51Kn P	6	11	4.15	MHSCSGKLPPLGIVNFL	51	M	NM_013617. 1	1 ... 921
397	OR52Qn P	10	11	4.58	MYTGSVRFPFLFVAVGI	45	M	AF121979.1	53 ... 1106
398	OR4Fn	0	15	86.21	IHGGMIIHIQFVNSISA	50	M	AF102522.1	40 ... 660
399	OR11Mn P	1	12	41.92	FSAACGSSFTL.....	48	M	AL359381.1	175785 ... 176720
400	OR52Nn	0	11	4.44	MHTGSARLPFLGVAIGF	57	M	NM_013619. 1	118 ... 969
401	OR56An	0	11	4.58	MNLASFRMPILQGGLLS	73	M	AF121981.1	89 ... 475
402	OR5AWn P	14	X		LXADFTSNLPTTSSNVV	39	R	X80671.1	203 ... 1129
403	OR52Nn	0	11	4.51	MHTGSARLPFLGVAIGF	55	M	AF121976.2	474 ... 1307
404	ORnP	15	X		ISCIFELTLPLPSNVV	31	M	AC073947.3	29192 ... 30115
405	OR52En P	6	11	4.58	VHSVSVRMPILGNIILL	62	M	AF121979.1	53 ... 1106
406	OR5BHn P	9	X		MVASCGGKTVSLCGTLT	40	M	NM_013728. 1	1 ... 948
407	OR4QnP	1	15	1.66	IHGAMAGHMQLMNSLSV	60	M	AC019272.4	62255 ... 61317
408	OR51En	0	11	3.04	MHSGSARLPFLGVIAIL	60	R	AF079864.1	632 ... 1576
409	OR11Kn P	2	15	1.66	FSGYGFCITLLITFVFI	53	M	AF121972.1	171 ... 1109
410	OR12D1 P	1	6	33.02	LHGSATIHLMSTGIAG	76	M	AL133159.4	16108 ... 15185

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
411	OR4NnP	3	15	1.61	LHGGGAGHIQLMNSMTM	55	M	AC019272.4	62255 ... 61317
412	OR11A1	0	6	33.02	FGATCTSVLVLTLSCLI	76	M	AL359381.1	175785 ... 176720
413	OR10C1	0	6	33.02	MLGACSCVGHFIATLIC	59	M	AL365336.1	122764 ... 121784
414	OR2H1	0	6	33.02	LLGTCVMQVQSLSSFVV	88	M	AL078630.1	48786 ... 47851
415	OR9RnP	8	12	59.71	LAVGGGCNIQFLLSITT	54	R	AF091579.1	7 ... 663
416	OR4FnP	0	7	0.53	.....VLHFQFVNSICG	50	M	AB030896.1	1 ... 906
417	OR7D4	3	19	11.31	VMAGTAIFVHLLATLGF	67	R	AF091580.1	7 ... 663
418	OR7E25 P	3	19	11.31	MIACSVLDLHIVIGFGL	61	R	AF091580.1	7 ... 663
419	OR2D2	0	11	5.69	LLGCCGSVVDFITGILI	65	M	AF073987.1	2 ... 649
420	OR10An	0	11	5.69	MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
421	OR2WnP	3	1	254.49	LLGGCVCQGHVWLAVVS	54	R	L34074.1	73 ... 1011
422	OR7E16 P	8	19	11.31	IAGCDLLDLHIMLALGL	60	M	AF102536.1	22 ... 669
423	OR52Pn	0	11	4.44	MHCMSARLPCLGAAVIV	59	M	AF121976.2	474 ... 1307
424	OR6AnP	4	11	5.66	LLGCCGGIVKLDLAILG	94	R	M64386.1	130 ... 975
425	OR7D2	0	19	11.24	VMPITVITLHLIMTLGF	61	R	AF091580.1	7 ... 663
426	OR52Un P	3	11	4.44	LHSASVRFPMLGVAVAY	52	M	AF121976.2	474 ... 1307
427	OR2AGn	0	11	5.6	MLGGDTLSIYYVMGFLP	55	M	AF102527.1	22 ... 669
428	OR7G3	0	19	11.24	ILVGNLVDLHMVVTLG	64	R	AF091580.1	7 ... 663
429	OR56Bn P	3	11	4.44	IHVGSFRFPVLQLAGMS	41	M	AF133300.1	25713 ... 26573
430	OR2AGn P	1	11	5.51	MLGSDTLIGHYITGFLP	55	M	AF102527.1	22 ... 669
431	OR56Bn	0	11	4.44	MHVASFRCSVLQLALMS	39	M	NM_013619. 1	118 ... 969
432	OR6AnP	5	11	5.51	LLGCCGGIVKLDLAILG	93	R	M64386.1	130 ... 975
433	OR4FnP	4	19	63.23	IHGGMVLHFQFVNSICG	49	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
434	OR6Wn	0	7	148.04	SFGSFAVSSPQDLSFVT	47	M	NM_010991.1	1 ... 939
435	OR4Mn	0	15	1.59	LHGAMLGHIQLMSSISV	52	M	AF259072.1	104176 ... 105099
436	OR52Yn P	13	11	3.6	VVVVVLQWPVMGMAVDF	29	M	AF133300.1	46551 ... 47498
437	OR11Hn P	2	15	1.78	FFGTCLCWIPCLSVIG	61	M	AF121972.1	171 ... 1109
438	OR9An	0	7	148.04	LSGTFVFSWPALMAILG	46	M	NM_010991.1	1 ... 939
439	OR5Mn	0	11	52.19	CILLFFYDFQLMSANLS	50	M	AC069563.9	129775 ... 130725
440	OR6Vn	0	7	148.04	FFGSFAAAPTSDMAFVS	45	M	NM_010991.1	1 ... 939
441	OR4Nn	0	15	1.61	LHGGGAGHIQLMNSMTL	53	M	AC019272.4	62255 ... 61317
442	OR51An P	4	11	3.6	EHTDSLILPFTGLACMS	43	M	NM_013617.1	1 ... 921
443	OR9PnP	10	7	148.04	FGSNSFEHLVFIHSLLM	39	M	NM_010983.1	178 ... 975
444	OR4H6P	3	15	1.66	MHGCI LGHVQLVNSISG	59	M	AF259072.1	104176 ... 105099
445	OR51Fn P	2	11	3.6	MHTFSLRLPLLGLTTI	48	R	AF079864.1	632 ... 1576
446	OR7E1P	3	11	68.1	MVACGVLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
447	OR51Tn	0	11	3.6	MHSLSVRFP LAGLQ LNT	44	R	AF079864.1	632 ... 1576
448	OR2Vn	0	13	104.15	IVVGGSFDIQVICMLF	84	M	AF102535.1	16 ... 669
449	OR51Hn P	7	11	3.6	MHGGSARAPVLGAVIIL	51	R	AF079864.1	632 ... 1576
450	OR51An	0	11	3.6	EHTVSIRLPFTGIAC TL	48	M	AF071080.2	26330 ... 27262
451	OR2AIn P	2	5	209.13	YLGSCLSNFHLMARILL	55	M	AC044846.2	112743 ... 113748
452	OR2F2	0	7	148.74	LLGGFTSNVQI ISSLT	54	M	AF073974.1	41 ... 649
453	OR1F12	0	6	31.61	MMANNAINLHMVTVIFV	58	M	AC023167.7	60743 ... 61663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
454	OR7G1P	0	19	11.24	ILAGSLMDVQMIASFGI	60	R	AF091580.1	7 ... 663
455	OR7G2	0	19	11.24	ILAGNLTNLLMIAAFGV	61	R	AF091580.1	7 ... 663
456	OR1M1	0	19	11.24	MHGISAFITHLIVAVIT	89	M	X89689.1	32 ... 472
457	OR51UnP	1	11	2.89	VTDDN.....	48	R	AF079864.1	632 ... 1576
458	OR52Hn	0	11	4.19	MHFVSGRIPDLGVPTVS	59	M	AF121975.1	50 ... 1012
459	OR1F1	0	16	6.15	MEVDNGVNLHLIEGVMT	75	R	M64377.1	1 ... 939
460	OR10PnP	0	16	87.09	MIGICTTTTHLVATFII	48	M	AF247657.1	1 ... 945
461	OR4FnP	4	19	7.9	IHGGMVLHFQFVNSICG	49	M	AB030896.1	1 ... 906
462	OR2T1	0	1	254.77	HLVGFGGDLIMCCMLI	92	M	AF102527.1	22 ... 669
463	OR7EnP	9	19	22.8	VAGCDLLDLHIMLAFGL	60	M	AF102536.1	22 ... 669
464	OR51Gn	0	11	3.6	LHSFSVRLPLMGVITVI	57	M	NM_013617.1	1 ... 921
465	OR2Tn	0	1	254.77	MVAGFGLDTFIMCCMLI	67	M	AF102527.1	22 ... 669
466	OR5BGnP	2	11	51.27	AAAAAGGSIHNLFAVEI	52	R	U50948.1	34 ... 978
467	OR5WnP	3	11	51.27	MGADCLVDIHCMFVVAC	51	M	AF146372.1	509 ... 1456
468	OR51Sn	0	11	3.6	MHSVSARLPLLLVLMGD	42	M	AF071080.2	26330 ... 27262
469	OR5WnP	1	11	51.27	.....LVFIES	55	M	AC074177.4	107189 ... 107708
470	OR51AnP	3	11	3.6	EHTDSLILLPTGVAMMD	46	M	NM_013617.1	1 ... 921
471	OR5Dn	0	11	51.21	FCGVTGWCILFCIANES	46	M	AF146372.1	509 ... 1456
472	OR7EnP	4	4	5.55	MVACGVLDLHIIDSFGL	54	R	AF091580.1	7 ... 663
473	OR51Fn	0	11	3.6	MHTFSSRPVVFALTTF	53	R	AF079864.1	632 ... 1576
474	OR5Dn	0	11	51.21	YCVVSGWGVLYLFANEC	48	M	NM_013728.1	1 ... 948
475	OR52Rn	0	11	3.6	VHSSSIRWPFMGVAVAF	58	M	AF121976.2	474 ... 1307
476	ORnP	27	11	51.21	FCFAAGQSPGFLCFFFF	23	M	AB030893.1	37 ... 930

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
477	OR7EnP	6	3	121.47	MVACDVLDLHIIDSFSL	57	M	AF073989.1	547 ... 1515
478	OR6Qn	0	11	54.04	LTGACAVTLPLDVSFLA	52	M	NM_010983.1	178 ... 975
479	OR4Fn	0	6	185.89	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
480	OR7EnP	3	13	40.31	FFSP.AAALHIMPAFGL	65	M	X89686.1	32 ... 472
481	OR7En	0	2	95.17	MVACDVLDLHIIDSFGL	57	M	AF073989.1	547 ... 1515
482	OR4Nn	0	14	0.27	LHGAMVGHVQLMNSLSL	58	M	AC019272.4	62255 ... 61317
483	OR2ASn P	7	1	254.77	.....GGGGMICGLLP	43	M	AF102535.1	16 ... 669
484	OR11Hn	0	14	0.33	FFGTCFIGIPYFQSVLF	90	M	AF121972.1	171 ... 1109
485	OR2Tn	0	1	254.77	MLAGFGLDMLIMCCMLI	69	M	AF102527.1	22 ... 669
486	OR2TnP	1	1	254.77	CMMGFSGDLLIMCCMLI	77	M	AF102527.1	22 ... 669
487	OR2AKn P	3	1	254.55	TLGGACSNIHVSGILL	50	M	AF102533.1	16 ... 669
488	ORnP	16	12	4.38	VLKSKCWQLPFYMLLM	25	R	Y07557.1	1 ... 942
489	OR5DnP	4	11	51.21	FCAVTGWSTLFCIANES	48	R	U50948.1	34 ... 978
490	OR7EnP	1	4	5.55	FVACDVLDLHIIDNFGI	54	M	AF102536.1	22 ... 669
491	OR5L2	0	11	51.27	FCGVVCCCIHLLVANEV	53	M	AF146372.1	509 ... 1456
492	OR5Dn	0	11	51.27	FCVVLVWCTLSLVANES	48	M	NM_013728.1	1 ... 948
493	ORnP	4	9	81.99	...CCCLFFQSIASGTII	23	M	AL359381.1	82137 ... 81544
494	OR10Qn	0	11	54.08	MVGSCGLPQLLLVSVLI	50	M	AL365336.1	123248 ... 124093
495	OR9MnP	1	11	51.27	LCVDSGGSIHNLFAVEI	54	M	AC069559.8	73704 ... 74636
496	OR7E62 P	5	2	73.96	MAACDVLDLHTIDSFRL	56	M	AF073989.1	547 ... 1515
497	OR9LnP	13	11	54.06	MFVGCTLVAYGILTMIA	32	M	AC069561.1 0	147203 ... 146274

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
498	OR7E46P	10	2	73.96	MAGVEFCDLHIMPAFGL	54	M	AF102536.1	22 ... 669
499	OR1S1	0	11	54.08	MIVVNILITHLLVGVI	56	M	AC073769.1	133488 ... 132556
500	OR5DnP	0	11	51.21	FCVIMGWCTLSCISSEC	45	M	AC069563.9	111696 ... 112671
501	OR9InP	4	11	54.06	FTASCGGNICCSAVIT	46	R	AF091579.1	7 ... 663
502	OR5Dn	0	11	51.21	FCVVSGWCELSLLANES	53	M	AF146372.1	509 ... 1456
503	OR9QnP	4	11	54.08	FTASCGASVRTIFAVMA	47	M	AL365337.1	192661 ... 191711
504	OR51CnP	0	11	3.04	MKTVSARMPMLGAMTVV	51	R	AF079864.1	632 ... 1576
505	OR5WnP	1	11	51.27	FCADCGVDIHL.....	53	M	AC069561.1 0	127636 ... 126698
506	OR9InP	2	11	54.06	FTAGCSCGLHCICAMFA	46	M	AC074177.4	106297 ... 105361
507	OR51AnP	4	11	3.04	MHSVSARVPVPGVVTGL	72	M	X89685.1	2 ... 481
508	OR5L1	0	11	51.21	FCVVVCCCIHLLVANEV	55	M	AF146372.1	509 ... 1456
509	OR7EnP	5	13	50.42	.....VVDLHIMPAFGL	66	M	X89686.1	32 ... 472
510	OR5BLnP	18	11	54.08	ILGNXLENQCFIFAMIT	29	R	M64392.1	1 ... 942
511	OR51En	0	11	3.04	MHSASVRFPLLGAIVMV	95	R	AF079864.1	632 ... 1576
512	OR51Dn	0	11	3.04	MHSASSRFPLIGIIVMV	61	R	AF079864.1	632 ... 1576
513	OR52In	0	11	3.04	MHTATARFPLMSGSMVS	46	M	AF121975.1	50 ... 1012
514	OR4KnP	2	18	19.04	IHTGMIVHSQFIDSLSS	56	M	AB030896.1	1 ... 906
515	OR52In	0	11	2.99	MHTATARAPLMSGSMVS	47	M	AF121975.1	50 ... 1012
516	OR4KnP	2	18	19.04	IHNIGIVVHSQFMTSIAI	55	M	AB030896.1	1 ... 906
517	OR52MnP	1	11	3.04	MHATSVRYLPIGIGVLL	51	R	AF079864.1	632 ... 1576

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
518	ORnP	7	6	31.58	FLVSCLLLLLLLEGIHW	30	M	AF073964.1	41 ... 649
519	ORnP	9	8	88.25	IXVVVLNIVNMTTIIFL	24	M	AC074177.4	149899 ... 148964
520	ORnP	9	10	70.63	YSIVMFYHAHFICELLN	26	M	AC068902.1 1	144125 ... 143193
521	ORnP	9	9	70.7	WWWWSWYGNFDD SITX	26	R	AF091563.1	7 ... 669
522	ORnP	9	5	202.43	FFFFFF.PPPPP.....	27	R	AF034902.1	4197 ... 5177
523	ORnP	10	11	137.77	LLLLWSQFXQFLAVVVV	29	R	M64376.1	1 ... 999
524	ORnP	3	11	16.31	NNNNNLLXMNILTLLAI	27	M	AL136158.1 4	29455 ... 30402
525	ORnP	17	11	55.6	LAGNNIYCYHM..LLLL	26	R	M64377.1	1 ... 939
526	OR6Pn	0	1	154.6	LIACCASSMKFDLAMIL	60	M	NM_010983. 1	178 ... 975
527	OR7EnP	3	14	33.48	MVACDVLDLHIIDSEGL	54	R	AF091580.1	7 ... 663
528	ORnP	12	11	138.51	LMCHS.FFFFFMMMMMM	29	R	AF091573.1	7 ... 663
529	OR7EnP	5	14	33.48	MAGGDFLDLYILPDFGL	55	M	AF073989.1	547 ... 1515
530	ORnP	7	10	127.4	S.CCCLLYIIHHHHHH	31	M	AC020958.1	164590 ... 163746
531	OR10XnP	2	1	154.6	MLGGCSAITELIISGLG	49	M	AC073778.1	168744 ... 167803
532	OR10Zn	0	1	154.71	MAACCTTFGMVILSVLV	56	M	AC025913.3	108128 ... 109067
533	OR6KnP	2	1	154.73	MYGIVGCTPEWVVHEIT	40	R	M64386.1	130 ... 975
534	OR6Kn	0	1	154.73	MHGIVSCTPEWVIHEIT	44	M	AC027184.3	54955 ... 54017
535	OR1FnP	1	4	97.57	.....IEGVMT	73	R	M64377.1	1 ... 939
536	OR1ABnP	3	19	19.44	MIGISAFNTHLV.....	64	M	AC073769.1	133488 ... 132556
537	OR52MnP	1	11	2.89	MHATSARYLPIGIGVLL	49	M	AF121975.1	50 ... 1012
538	OR1XnP	6	5	202.43	MIANTLGIVHIFAALFA	71	M	AF102530.1	1 ... 666

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
539	OR4FnP	8	16	83.04	QQQQQVIHSQFVNSLTC	46	M	AC019272.4	62255 ... 61317
540	OR52Mn P	5	11	2.89	MHATSVRYLPIGIGVLM	45	R	AF079864.1	632 ... 1576
541	OR2Vn	0	5	209.61	IVVGGSFDIQVICMLF	83	M	AF102535.1	16 ... 669
542	OR2V1P	4	5	209.61	IVVGGSFDIQALCCMLL	90	M	AF102537.1	16 ... 669
543	OR2Zn	0	19	65.55	ITGVGSVNIQILSGILL	76	M	AC073769.1	54319 ... 55289
544	OR52Kn P	5	11	2.89	.....AMFIEL	52	M	AF121975.1	50 ... 1012
545	OR10Hn	0	19	19.7	MFGFSWGMVIGLVTAI	75	M	AC023604.2	214343 ... 213396
546	OR2Dn	0	11	5.77	ILGCCRSVVDIFIMGILA	85	M	AF073987.1	2 ... 649
547	OR7EnP	6	2	161.49	VVGCCSSDLHIMPAFGL	64	M	X89686.1	32 ... 472
548	OR11Gn P	4	14	0.27	FFGSCSLWIPVSLSLLI	68	M	AC027184.3	54955 ... 54017
549	ORn P	12	14	0.27	GSCGNSLHHYLMVNIIL	28	M	AF121972.1	171 ... 1109
550	OR11Gn	0	14	0.33	FFGSCNLWIPNFLSPVM	67	M	AF121972.1	171 ... 1109
551	OR11Hn P	5	14	0.33	FTGTAFFSVSQFLSIIL	68	M	AF121972.1	171 ... 1109
552	OR6Kn	0	1	154.73	MHENGGFIPEDHATII	46	R	AF034897.1	354 ... 1199
553	OR11Hn	0	14	0.33	FFGTCVGCVP LCFNIIG	71	M	AF121972.1	171 ... 1109
554	OR6Kn P	0	1	154.73	MHGNGGFVPEWDHAAIF	46	M	AL365336.1	122764 ... 121784
555	OR11Hn P	2	14	0.33	FFGTCLIGISFFVSFIL	70	M	AF121972.1	171 ... 1109
556	OR6Kn P	2	1	154.82	MHGVAGFMPECDRASIT	43	M	AC027184.3	54955 ... 54017
557	OR6Kn	0	1	154.84	MHGISGCLPEWVIHEIA	45	R	AF034900.1	1 ... 963
558	OR2Ln	0	1	254.55	SSGGAGINAHYVSTFLF	53	M	AF102527.1	22 ... 669
559	OR4Gn P	8	16	83.04	ICRKMAVHSQFVNSISA	45	M	AB030892.1	1 ... 939

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
560	OR6Nn	0	1	154.84	IHGACGGGVELDINKIA	50	R	M64386.1	130 ... 975
561	OR2LnP	2	1	254.55	SLAVGGINAHY.....W	52	M	AF102535.1	16 ... 669
562	OR9A1	0	7	146.91	LLGTLVLSPALMAIIG	45	M	L14567.1	17 ... 667
563	OR6Nn	0	1	155.69	THGACACCSELDINIII	51	M	AL136158.1 4	29455 ... 30402
564	OR10Hn	0	19		MFGFSCGMVVAGLVTAL	86	M	AC023604.2	245345 ... 246298
565	OR7EnP	4	9	71.72	MVACDVLDLHIMNSFGL	57	M	AF073989.1	547 ... 1515
566	OR2AQn P	5	1	155.69	FCHSCLLLSLLPFFFF	31	M	AL359352.1	55588 ... 56546
567	OR2LnP	3	1	254.55	SMAGAGINAHYVSSFLF	50	M	AF102537.1	16 ... 669
568	OR5ARn	0	11	52.46	FVVDCGASAHLLLCIES	53	R	AF091579.1	7 ... 663
569	OR7EnP	4	9	71.79	TAGGETLDLHIMPAFGL	57	M	AF102536.1	22 ... 669
570	OR10AA nP	2	1	155.69	THGMCAAAPLHVIAATC	84	M	AC005992.1 5	9114 ... 8173
571	OR10Jn P	4	1	157.7	MIAICGVVVQSNVSVIV	72	M	X92969.1	8035 ... 8961
572	OR5A1P	0	11	55.81	FVGLCGGSIQSNVVVGT	81	M	Y15525.1	1 ... 705
573	OR2AHn P	5	11	52.46	MLGSCISSVILVFSIVI	51	M	AF247657.1	1 ... 945
574	OR10Jn P	4	1	157.7	LLGICGIMVQSNVSVLL	68	M	X92969.1	8035 ... 8961
575	OR56Bn P	2	11	4.93	IHMCSSRLPVLQLVVVS	39	M	AF121975.1	50 ... 1012
576	OR5M1	0	11	52.35	CIVIFIYSSQLMVANLS	49	R	AF091579.1	7 ... 663
577	OR52Wn P	0	11	4.93	MHTASLLAVPLGLSISM	48	M	AF121976.2	474 ... 1307
578	OR5AMn P	5	11	52.35	FIVIIYAYNVQLMVANLC	35	M	AC068904.1 5	113793 ... 114719
579	OR52Bn P	3	11	4.93	MHFVSTQTPVLGVPSVV	89	M	AF121975.1	50 ... 1012
580	OR5MnP	1	11	52.35	CVLLYFWVMQLLSANLV	48	R	X80671.1	203 ... 1129

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
581	OR5APn P	6	11	52.35	FGAGGALNIHFIFANES	55	R	X80671.1	203 ... 1129
582	OR56Bn	0	11	4.95	IHFCSFRLPVLQLALVS	41	M	AF121975.1	50 ... 1012
583	OR5APn	0	11	52.35	FGLGCTANIHMIFSIVS	55	M	AF121977.1	262 ... 1197
584	OR52Bn	0	11	4.93	GHFVSARIPVLGVPMVL	73	M	AF121975.1	50 ... 1012
585	OR9Gn	0	11	52.5	FAAYCVGNIIKMLLNVC	45	M	AC074177.4	106297 ... 105361
586	OR52Kn	0	11	2.86	MHSISARLPLLGVASVL	53	M	NM_013619. 1	118 ... 969
587	OR5MnP	1	11	52.35	FIVIYAYNSQLMVANLC	51	M	AC074177.4	106297 ... 105361
588	OR52Kn	0	11	2.86	MHSISARLPLLGVAIVL	52	M	NM_013619. 1	118 ... 969
589	OR52Kn P	3	11	2.82	MHSISARLPLLGVAIGL	53	M	NM_013619. 1	118 ... 969
590	OR52Bn P	4	11	2.78	IHFISARVPDLGVLTVL	57	M	AF121975.1	50 ... 1012
591	OR2B6P	0	6	31.62	LLGAYATNWLLLVSFHI	79	R	L34074.1	73 ... 1011
592	OR2WnP	7	6	31.61	LLRGCASNVMLAFAIVL	58	M	AF102516.1	52 ... 669
593	OR2AnP	5	7	148.83	TMAHCTCLVHLISSILG	72	M	AF102521.1	22 ... 669
594	ORnP	16	6	31.61	FLVSCMDFMYIVLNNVI	39	M	AF102516.1	52 ... 669
595	OR2LnP	0	1	254.55	STAVAGINAHYVSAFLF	50	M	AF102527.1	22 ... 669
596	OR2W2P	5	6	31.61	LLGGCVCQSYWVLSIVM	55	R	L34074.1	73 ... 1011
597	OR2LnP	1	1	254.55	SLAGA.....	61	M	AF102535.1	16 ... 669
598	OR2B7P	1	6	31.61	LLGGCTTNIQLIVSFLV	59	M	AC044846.2	105668 ... 104736
599	OR2Ln	0	1	254.43	SLGGAGINAHYVSAFLF	53	M	AF102527.1	22 ... 669
600	OR5BFn	0	1	254.77	VVVYLASYMHSISAVGG	46	M	AL359352.1	9138 ... 8177

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
601	OR2LnP	4	1	254.55	SVAGMSMDAHYVSTFLF	47	M	AF102527.1	22 ... 669
602	OR7EnP	3	10	17.14	MVACCVLDLHI.....	51	R	AF091580.1	7 ... 663
603	OR1H1	2	9	106.04	LGADNVIHVHLLVALLA	57	M	AC073769.1	133488 ... 132556
604	ORnP	14	1	254.49	TTTKKSERIYIVSSFLI	24	M	AF102527.1	22 ... 669
605	OR4Dn	0	11	55.81	IHGGIASHIQLMNNVTI	64	M	AC019272.4	183633 ... 182701
606	OR1Ln	0	9	106.04	MYGNSFFHLHLQEAVLT	54	M	AC023167.7	60743 ... 61663
607	OR5AXn	0	1	254.2	L TSAIVIFAYGGVGLSS	47	M	AL136158.1 4	154973 ... 155908
608	OR5An	0	11	55.77	YCGLCGGSIESTVSVGV	64	M	Y15525.1	1 ... 705
609	OR5AYn	0	1	254.2	LVAGILNLLYGSIGYAS	50	M	AL359352.1	126933 ... 127889
610	OR13Gn	0	1	255.42	LTLGMMINVHLVADLAG	59	M	AF102540.1	16 ... 669
611	OR5BBn P	0	11	55.77	YASLCGGSVHPLEAVGG	54	M	Y15525.1	1 ... 705
612	OR9GnP	6	11	52.49	FVXNCAGNIIELMLNIT	47	M	AF121977.1	262 ... 1197
613	OR2TnP	4	1	254.77	HLAGFAGNLLVMCCMLI	75	M	AF102527.1	22 ... 669
614	ORnP	7	1	255.42	PVAGKGAF LHSVESLGS	38	M	AL365337.1	192661 ... 191711
615	OR1Jn	0	9	95.9	MITDSVLSSHLMVGVI	66	M	AF102524.1	52 ... 669
616	OR2CnP	1	16	6.47	LLGACIGNIQFLVCFTV	85	M	M84005.1	1 ... 936
617	OR9GnP	2	11	52.49	FAAYCYGNILNLLNVS	49	M	AL365337.1	192661 ... 191711
618	OR2C1	0	16	6.4	LLGACIGNIQFLVCFTV	85	M	M84005.1	1 ... 936
619	OR51An P	2	11	4.22	.....	52	M	AF071080.2	26330 ... 27262
620	OR9Gn	0	11	52.49	LCAYCGGNAHNLVVTVS	53	M	AC068904.1 5	165039 ... 165965

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
621	OR52Bn	0	11	2.78	LHFISTRTPILGILTVL	61	M	AF121975.1	50 ... 1012
622	OR1K1	0	9	105.89	MFGVSMVHLYLIEGVVT	58	R	M64377.1	1 ... 939
623	OR51Rn P	3	11	2.78	MHTYSARLPGLGSISLL	47	R	AF079864.1	632 ... 1576
624	OR7EnP	2	13	54.83	MVACDVLDLHILDSFGL	57	M	AF073989.1	547 ... 1515
625	OR52Pn P	3	11	2.82	MHSASARLPLLGAAVVT	55	M	AF121975.1	50 ... 1012
626	OR7EnP	5	9	70.7	MVACDVQYVHSMDSFGL	48	M	AF102536.1	22 ... 669
627	OR7EnP	5	9	70.7	TAGGD.CCCCC.....	43	M	AF073989.1	547 ... 1515
628	OR4KnP	1	21	8.12	IHTGMIVHSQFIDSLSS	57	M	AF259072.1	104176 ... 105099
629	OR4KnP	2	21	8.12	IHNGIVVHSQFMTSTAT	54	M	AB030896.1	1 ... 906
630	OR7EnP	6	9	70.7	.....VFLVHSPAFGL	58	M	X89686.1	32 ... 472
631	OR51In	0	11	4.15	MHSFSGKTPFVGIVITYM	51	R	AF079864.1	632 ... 1576
632	OR51In	0	11	4.15	MHSMSGRTPLLGVLTFM	56	R	AF079864.1	632 ... 1576
633	OR2AnP	1	7	148.83	TLAICTFL.....	63	M	AF102521.1	22 ... 669
634	OR2A2	2	7	148.83	TLAVCTCLVHLITCVLG	68	M	AF102521.1	22 ... 669
635	OR2AnP	8	7	148.83	TFAACTCLVHLITCVLG	68	M	AF102521.1	22 ... 669
636	OR2Gn	0	1	256.63	LHGSCMSTVQLLASFLV	59	M	NM_008762.1	1 ... 936
637	OR2AnP	0	7	148.83	TLAHCAFFFFL.....	57	M	AF102521.1	22 ... 669
638	OR6Fn	0	1	254.2	MFGCYGCAVPLAIAVIS	71	R	M64378.1	1 ... 933
639	OR2AnP	4	7	148.83	TLAHCAFLVHLISCILG	68	M	AF102521.1	22 ... 669
640	OR2Gn	0	1	256.02	LLGSCISSIHFLVSFVI	63	M	M84005.1	1 ... 936
641	OR7E37 P	5	13	26.5	MAGGEFLDLHIMPAFGL	57	M	AF073989.1	547 ... 1515
642	OR5AVn	0	1	256.02	AMATVMSCMHAVFGLVI	51	M	AL359352.1	9138 ... 8177

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
643	OR2AJnP	7	1	254.43	VLLGCGINVHYVSAFLI	55	M	AF102527.1	22 ... 669
644	OR13EnP	1	9	39.89	MLGSCLTNLQLLATLTA	79	M	AJ251155.1	15491 ... 16423
645	OR2Cn	0	1	257.85	FHGACAGTVGLMASFVL	63	M	M84005.1	1 ... 936
646	OR2TnP	0	1	254.43	IPGGCSLDLQAMCCMLV	59	M	AF102537.1	16 ... 669
647	OR2WnP	2			LMGSCVCNIMQTLGLLV	56	M	M84005.1	1 ... 936
648	OR13Jn	0	9	39.89	MLGSCALKTEILGSLV	82	M	AJ251155.1	6062 ... 6997
649	OR6RnP	2	1	254.39	SFGCFLGLPSLDSSLIS	45	M	NM_010983.1	178 ... 975
650	OR5ATn	0	1	254.39	VLASLVYIMHGLINLDC	50	M	AL359352.1	111313 ... 112242
651	OR2Zn	0	19	10.64	ITGVGSVNIQILSGILL	76	M	AC073769.1	54319 ... 55289
652	OR4Ln	0	14	0.08	MHGGMLIHSQVLDSLST	53	M	AB030893.1	37 ... 930
653	OR4UnP	14	14	0.15	RHSGMAMHSQVLDSLST	46	M	AB030895.1	1 ... 924
654	OR4Fn	0	6	185.98	IHGGMIIHIQFVNSISA	50	M	AF102522.1	40 ... 660
655	OR4FnP	2	6	185.98	IHGGMAIHVQFVNSISS	50	M	AB030896.1	1 ... 906
656	OR4Fn	0	6	185.98	IHGGMATHVQFVNSISG	50	M	AB030896.1	1 ... 906
657	OR4Fn	0	6	185.98	IHGGMTIHVQFVNSISG	50	M	AB030896.1	1 ... 906
658	OR4AnP	5	11	50.28	IHGGILGHVQFVNDICV	65	M	AF102522.1	40 ... 660
659	OR4LnP	1	14	0.21	KHGSMLIHSQVLDSLST	53	M	AB030893.1	37 ... 930
660	OR7E33P	6	13	54.79	MAGGEFLDLRILPAFGL	56	M	AF073989.1	547 ... 1515
661	OR2Cn	0	1	257.85	FHGACAGTVGLMASFVL	63	M	M84005.1	1 ... 936
662	OR4Kn	0	14	0.15	MHGGMSVHSQFVDSLST	53	M	AF259072.1	104176 ... 105099
663	OR5U1	0	6	33.45	VIASVAASMHILFTAAI	84	M	AL359352.1	111313 ... 112242
664	OR4Kn	0	14	0.08	IHGGMAVHSQFMDLSS	58	M	AF259072.1	104176 ... 105099

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
665	OR5V1	0	6	33.45	LVVGCSANVHLLTGIGT	84	M	AL365337.1	192661 ... 191711
666	OR4QnP	1	14	0.08	LHGAMAGHVQLMNSISI	62	M	AF259072.1	104176 ... 105099
667	OR12D3	0	6	33.45	LHGSAAIYMHMLVTISG	70	M	AL359381.1	128169 ... 127234
668	OR4Kn	0	14	0.08	IHTGMIVHSQFIDSLSS	59	M	AF259072.1	104176 ... 105099
669	OR51CnP	3			MKTVSARMPMLGAMTVV	53	R	AF079864.1	632 ... 1576
670	OR1J2	0	9	105.94	MITDSVLSSHLMVGUIL	66	M	AF102524.1	52 ... 669
671	OR5BJnP	3			SIGSAAVNTKFPSC LGV	46	M	AF073965.1	2 ... 643
672	OR1J1	0	9	105.82	TIADSGICLHLIAAAIL	63	M	AF102524.1	52 ... 669
673	OR13En	0			MLGSCLTNLQLLATLTA	83	M	AJ251155.1	15491 ... 16423
674	OR4KnP	5	14	0.08	IHGGMVIHTHFVNSLSM	53	M	AB030893.1	37 ... 930
675	OR1LnP	5	9	105.84	MYGNSFFHLHLQEAVLT	54	M	AC023167.7	60743 ... 61663
676	OR2CnP	2			FHGACAGTVGLMASFVL	59	M	M84005.1	1 ... 936
677	OR4TnP	9	14	0.21	MLSELLSHSQFVKLSI	47	M	AC019272.4	62255 ... 61317
678	OR5BnP	1			FVITSGCNIHNIVVNDF	51	M	AF121977.1	262 ... 1197
679	OR4Kn	0	14	0.21	IHGGM TLHFQFINSISS	53	M	AB030896.1	1 ... 906
680	OR11Ln	0	1	254.43	LVGACVTTLHMILSVLI	50	M	AF121972.1	171 ... 1109
681	OR7E68P	5	10	17.21	MAGGELLDLHIMPAFGL	56	M	AF102536.1	22 ... 669
682	OR7EnP	2	10	17.21	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
683	OR7E31P	6	9	70.71	TAGGELLDLHIMPAFGL	55	M	AF073989.1	547 ... 1515
684	OR7EnP	3	9	70.71	MVACDVLDLHIMDSFGL	58	M	AF073989.1	547 ... 1515

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
685	OR5AKn P	3	11	52.82	LAATCGMNVHFLFVNLF	79	R	U50948.1	34 ... 978
686	OR5AKn	0	11	52.83	FAATCGMNVQFLFVNLF	79	R	U50948.1	34 ... 978
687	OR5AKn	0	11	52.83	FAATCGINVFDFVDLF	79	R	U50948.1	34 ... 978
688	OR5BQn P	9	11	52.82	TTTTLLLLMLTFFFF	42	R	U50948.1	34 ... 978
689	OR1Nn	0	9	105.94	LLGGNVLPMLHIMGLV	56	R	AF091566.1	1 ... 663
690	OR1J4	0	9	105.94	MITDNVLNSHLIVGVIL	69	M	AF102524.1	52 ... 669
691	OR1Nn	0	9	105.94	MLGDSLLVTHLVGLV	85	R	AB038167.1	1 ... 933
692	OR2AnP	4	3	94.41	TLAVCTIMVHHLGSIVG	65	M	AF102521.1	22 ... 669
693	OR2ANn P	17	9	93.78	.....VVVLEFMVNLLI	23	M	AC074177.4	128803 ... 129726
694	OR5K1	0	3	104.47	FCETCGAHIHLFSVQF	51	R	AF091575.1	52 ... 663
695	OR2K2	0	9	93.78	MLGSCVTTFLEFMVSLLI	60	M	AJ251154.1	35662 ... 36615
696	OR8Hn	0	11	51.76	MAGTCGIDVNSIIVTLV	51	M	AC069559.8	36251 ... 35322
697	ORnP	15	11	51.76	LIFKNLFSPLXXHYIL	28	M	X89682.1	2 ... 472
698	OR4AnP	14	11	50.28	FGRRVVGHIQLYGHNYV	38	M	AB030895.1	1 ... 924
699	OR4An	0	11	50.28	LHGGVVGQFQIVNGSCI	59	M	AB030895.1	1 ... 924
700	OR6Sn	0	14	0.58	FFGAFAGPGPADLAVIS	50	R	M64378.1	1 ... 933
701	OR4RnP	16	11	50.28	NLGAIMEHVXSVNGNYL	52	M	AF102522.1	40 ... 660
702	OR13Cn	0	9	86.77	MLGTGGINVQFLTTFLT	65	M	AJ133425.1	61 ... 1014
703	OR13Dn P	4	9	86.77	MYGSCVLNTELIGNFLS	64	M	AC023789.5	371264 ... 372220
704	OR7EnP	3	11	2.13	MIACGVLDLHIINSFGL	54	R	AF091580.1	7 ... 663
705	OR10Pn P	1	12	59.88	MIGICTTTTHLVATFII	49	M	AF247657.1	1 ... 945
706	OR8In	0	11	51.76	MVVCCMISISVSLATLS	50	M	AC069559.8	137090 ... 138039
707	OR8G1	0			..IIIGICVHCIVGNIV	75	R	AF091576.1	52 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
708	ORnP	7	12	59.88	CFPGEAFFTLL.....	34	M	AL359352.1	145887 ... 145042
709	OR5F1	0	11	51.76	MIATCGANVNHSLANIG	50	M	Y15525.1	1 ... 705
710	OR5FnP	1	11	51.76	MIATCGANVNYFFANKG	52	M	Y15525.1	1 ... 705
711	OR6BnP	6	2	251.7	LSVCCFSIIKFDLAILF	70	M	L14567.1	17 ... 667
712	OR2D1	0			LLGCCASVVDFITGILI	64	M	AF073987.1	2 ... 649
713	OR5ASn	0	11	51.76	MAADCLSTVHLLLCIQS	52	M	AC068904.1 5	165039 ... 165965
714	OR5SnP	8	2	251.7	FSSTTGRSVQLKLCMMN	64	R	AF091579.1	7 ... 663
715	OR5AQn P	0	11	51.76	SAVTDAGNTHGPFSAF	51	R	X80671.1	203 ... 1129
716	OR6BnP	3	2	251.7	LSVCCFSIIKFDLAILF	67	M	L14567.1	17 ... 667
717	OR5JnP	2	11	51.76	YVLTGGGNTHGLFSIAL	52	R	X80671.1	203 ... 1129
718	OR9AnP	4	7	146.91	QLGTLVFFWPALMAIIG	44	M	NM_010991. 1	1 ... 939
719	OR5BEn P	2	11	51.76	YSLTCVLNTHSFLSTST	45	R	AF091564.1	7 ... 663
720	OR9An	0	7	146.91	LLGTFVFFWPVLMVAVLG	47	M	NM_010991. 1	1 ... 939
721	OR8Hn	0	11	51.76	MVGTCGIDVNSIIATLV	51	M	AC069559.8	36251 ... 35322
722	OR5BNn P	14	11	51.76	LLMTCAYMSHS.....P	54	M	AF102528.1	52 ... 669
723	OR8Jn	0	11	51.76	LLIVVLYTVVCVSANLF	80	M	X89682.1	2 ... 472
724	OR9NnP	9	7	146.91	LFGTFIIIIIL.AAAAA	36	M	NM_010991. 1	1 ... 939
725	OR7EnP	4	7		MVACGMLDLHITHSFAL	51	R	AF091580.1	7 ... 663
726	OR7E9P	3	7		MVACDVLDLHVIDSFGL	51	M	AF073989.1	547 ... 1515
727	OR8KnP	8	11	51.76	MMITLICQIIDILTNP	36	M	AC069563.9	28460 ... 29383
728	OR2AnP	1	7	148.97	ILAHC.....	44	M	AF102521.1	22 ... 669
729	OR8Kn	0	11	51.76	LLIIFIYQMFKSFSNLS	56	M	AF102528.1	52 ... 669
730	OR7E39 P	4			MVGGEFLHLMHIMPAFGL	55	R	AF091580.1	7 ... 663

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
731	OR7E27P	3			MAGGELLDLHIMPAFGL	57	M	AF102536.1	22 ... 669
732	OR2Hn	0	6		FLGTCVMEVQSLASILV	81	M	AL078630.1	41097 ... 40165
733	OR13Cn P	2	9	40.16	MLGACGATVQLMANFLV	87	M	AJ133428.1	61 ... 1017
734	OR13Cn	0	9	40.16	MFGACGAAVQLMTNFLV	89	M	AJ133424.1	61 ... 1017
735	OR2S1P	4	9	40.16	MFGACGANVQLMTNFLL	89	M	AJ251154.1	2703 ... 1747
736	OR2AMn P	1	9	40.16	.....RRRRRV.MMMMM	63	M	AJ251154.1	2703 ... 1747
737	OR1N1	0	1		MLGDSLLVTHLVLGVLV	85	R	AB038167.1	1 ... 933
738	OR2S2	0	9	40.13	MFAGCSIAVHLMTNFLV	83	M	AJ251154.1	2703 ... 1747
739	OR7E26P	4	1		MAGGELLDLHIMPAFGL	56	M	AF102536.1	22 ... 669
740	OR1F11	0			LAGNNGVNLHLIEGVT	99	R	M64377.1	1 ... 939
741	OR5ACn P	3	3	103.97	FGATCIIHILHLSIQF	66	R	AF091575.1	52 ... 663
742	OR5B10P	2	13		MVATNGCNLRDLMSNVL	46	M	AF102528.1	52 ... 669
743	OR2AnP	1	12	85.7	TLAVCAFLVHLIACILG	76	M	AF102521.1	22 ... 669
744	OR1E5	0	13		MLGDSLLHLHLIMGILI	83	R	Y07557.1	1 ... 942
745	OR4Fn	0	6	185.71	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
746	OR5CnP	0	9	40.53	MAADC.....	47	M	Y15525.1	1 ... 705
747	OR2WnP	0	6	31.62	LLGGCVSNIMQALAIIA	64	M	AF102516.1	52 ... 669
748	OR2L2	0			..IIIGINAHYVSSFLL	48	M	AF102537.1	16 ... 669
749	OR4H8P	2	14		MHGCILGHVQLVNSISG	56	M	AF259072.1	104176 ... 105099
750	OR5D10P	5			LCVVTTWCTLFTSANES	44	R	AF010293.1	211 ... 1143
751	OR7A12P	1	14		MVIVSAMNIEMMSALGG	68	M	AF283558.1	1 ... 927
752	OR2L1	0			..IIIGINAHYVSTFLF	48	M	AF102527.1	22 ... 669
753	OR2F3P	0	14		LLGGFTSSVQIISSLLT	55	M	AF073974.1	41 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
754	OR4H10P	2	15		MHGCILGHVQLVNSISG	57	M	AF259072.1	104176 ... 105099
755	OR5H1	0			..IIILGHIHFVFSIQF	56	R	AF091575.1	52 ... 663
756	OR2K1	0			..IIIIITTLVCMVSLLI	58	M	AJ133428.1	61 ... 1017
757	OR7E11P	7	11		MAGGEFLDLHILPAFGL	52	M	AF073989.1	547 ... 1515
758	OR7A3P	1	11		MVIVSAMNIEMMSALGG	68	M	AF283558.1	1 ... 927
759	OR6A1	0	11		LLGCCGGIVKLDLAILG	91	R	M64386.1	130 ... 975
760	OR5I1	0	11		FCADSLGSVHFLYGV EI	52	M	Y15525.1	1 ... 705
761	OR2H3	0	6		ILGTCVIGVQSVASILV	86	M	AL078630.1	41097 ... 40165
762	OR10J1	0			MVGICGIVTQSTISVLV	73	M	X92969.1	8035 ... 8961
763	OR7E3P	3	11		MFACGVLDLHIIDSFGL	54	M	AF102536.1	22 ... 669
764	OR1D6P	1	11		LVVANLFYIHLLTGIFI	48	R	Y07557.1	1 ... 942
765	OR5D10P	2	18		LCVVTTWCTLF TSASES	45	R	U50948.1	34 ... 978
766	OR5D5P	2	18		LCVVTTWCTLF TSANES	46	M	AC073947.3	29192 ... 30115
767	OR52A1	0	11		MHQGSMVCLIGVAVAF	72	M	NM_013620.1	1 ... 945
768	OR2AEn	0	7	98.36	HLGGCMGNIHIVSLLL	48	M	AC073769.1	143294 ... 142353
769	OR6LnP	7	10	149.44	LLSSCSSAVSLRAAILA	40	M	NM_010983.1	178 ... 975
770	OR6LnP	7	10	149.44	LLSSCSSAVSLRAAILA	41	M	NM_010983.1	178 ... 975
771	OR7MnP	7	10	149.44	.....NVYVSL.....	29	M	AC073947.3	43325 ... 42733
772	OR13Cn	0	9	86.77	MFGACGTDVQFMSNVL I	69	M	AJ133428.1	61 ... 1017
773	OR13Cn	0	9	86.85	MLGTCCGANVQFMATFTM	71	M	AJ133425.1	61 ... 1014
774	OR2InP	6			LLGSC.....	79	M	AL078630.1	151152 ... 150391

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
775	OR4An	0	11	50.28	LHGGVVGHFQVVNSICV	58	M	AB030895.1	1 ... 924
776	OR2InP	3			.....RRRRRMARILL	77	M	AL078630.1	151152 ... 150391
777	OR4AnP	4	11	50.28	LHGGVVGSGFQVVNGICV	53	M	AB030896.1	1 ... 906
778	OR4AnP	7	11	50.28	PHGGAVAHFQVVNGICV	57	M	AB030896.1	1 ... 906
779	OR8C1P	2	11		LCVHCGMGVHCMIVVVV	72	M	AC068905.1 2	76922 ... 75948
780	OR4AnP	1	11	50.28	LHGDVVGHFQVVNGICV	56	M	AB030896.1	1 ... 906
781	OR7E15 P	5	11		MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515
782	OR10A1	0	11		MFGVCAPVVQWAGTVVI	76	M	AF247657.1	1 ... 945
783	OR2An	0			TSAVCTCLVHLI.....	70	M	AF102521.1	22 ... 669
784	OR7EnP	6			MAGGELFHLHIMPAFGL	57	M	AF073989.1	547 ... 1515
785	OR7En	0			MAGGDFLDLHIVPAFVL	54	R	AF091580.1	7 ... 663
786	OR51A1 P	5	11		MHTLSARLPLLAIVITFL	43	R	AF079864.1	632 ... 1576
787	OR7E47 P	4			KAGTNLLDLYIMPTFGL	56	M	AF073989.1	547 ... 1515
788	OR5B5P	2	3		MAATNICNIHELVANIS	48	M	AF146372.1	509 ... 1456
789	OR1F10	0	3		MFVDNGVNLHLIEGVM	72	R	M64377.1	1 ... 939
790	OR8G2	0			..IIIGLGIHFVLSNIT	75	M	AF102518.1	52 ... 669
791	OR1Sn	0	11	54.08	MIVVNILITHLLVGIVF	55	M	AC073769.1	133488 ... 132556
792	OR4AnP	3	11	50.73	LHGGAVGHFQVVSGLCV	56	M	AB030896.1	1 ... 906
793	OR4AnP	7	11	50.76	LHGGILGHFQVVNGMCV	58	M	AB030896.1	1 ... 906
794	OR4AnP	5	11	50.66	LHGGVLGHFQVVNGMRV	56	M	AB030896.1	1 ... 906
795	OR4AnP	7	11	50.73	PHGGVVGRFQVVVKICV	54	M	AB030896.1	1 ... 906
796	OR4AnP	1	11	50.81	LHGGIVGHFQVVSGMCV	60	M	AB030896.1	1 ... 906
797	OR4AnP	10	11	50.81	LHGGVVGNFQVVNGICV	55	M	AF102522.1	40 ... 660
798	OR4An	0	11	50.73	LHAGVAGHVQFMNGICV	62	M	AB030895.1	1 ... 924
799	OR4An	0	11	50.73	LHGGVVGHVQFVNGICV	57	M	AB030896.1	1 ... 906
800	OR7E42 P	4			MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
801	OR2M3P	2			ITLGCFLDIDALCCMIF	55	M	AF102537.1	16 ... 669
802	OR4H11P	2	4		MHGCI LGHVQLVNSISG	57	M	AF259072.1	104176 ... 105099
803	OR7E57P	5			MAXGEFLDLHILPAFGL	51	M	AF102536.1	22 ... 669
804	OR2B1P	0	5		LLGAYATNWLLLVSFHI	78	R	L34074.1	73 ... 1011
805	OR7E34P	2			MAGGDSL DLHIMPAFGL	56	M	AF073989.1	547 ... 1515
806	OR7E56P	4			MAGDELFFLHILPAFGL	52	M	AF073989.1	547 ... 1515
807	OR3AnP	1	5		LHAGCACNTHALAAMAA	49	M	AF073967.1	2 ... 649
808	OR4H5P	2	5		MHGCI LGHVQLVNSISG	56	M	AF259072.1	104176 ... 105099
809	OR1En	0	5		MLGDSL LHLHLIMGILI	82	R	Y07557.1	1 ... 942
810	OR51CnP	2	11	3	MKTVSYYYIXQ.....	48	M	AF121975.1	50 ... 1012
811	OR2WnP	2	6	30.51	LLGGCVSNIMQALAIIA	64	M	AF102516.1	52 ... 669
812	OR51B1P	5	11		AHSVSGRSPVRPLITIL	68	M	AF071080.2	15931 ... 16851
813	OR7E81P	3			MAGGEFFSLHIMPAFGL	54	M	AF102536.1	22 ... 669
814	OR7E44P	1			MAGGELFDLHIMLA FGL	53	M	AF073989.1	547 ... 1515
815	OR5B7P	2	6		MAATNICNIHEL VANIS	47	M	NM_013728.1	1 ... 948
816	OR7E36P	4			MAGGELFFLHIMPAFGL	58	M	AF073989.1	547 ... 1515
817	OR2A5	0	7		TMAHCTCLVHLIASILG	74	M	AF102521.1	22 ... 669
818	OR5B1P	2	8		MAATNICNIHEL VANIS	47	M	AF146372.1	509 ... 1456
819	OR8B8	0	11	137.68	LLVVSGMGAHCVVVDIV	72	M	AC069559.8	120212 ... 119283
820	OR8B4P	0	11	137.71	LCVNCGVGAHSFVVITL	87	M	AC068910.21	133103 ... 132162

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
821	ORnP	15	11	137.77	LCVENRRRTATHCKSHII	35	M	AC069563.9	60295 ... 59327
822	OR8B3	0	11	137.77	LLVICAMGAHCVVNVIV	85	M	AC069563.9	129775 ... 130725
823	OR2Bn	0	6	30.51	LLGSCASNQLWLISFLI	89	R	L34074.1	73 ... 1011
824	OR8B6P	6	11	137.77	LAFFCGLSAHCVAAVI	73	M	AC069559.8	96224 ... 95292
825	OR8B5P	6	11	137.77	LFFFXGLGAHCVVANTV	73	M	AC069559.8	96224 ... 95292
826	OR4E2	0	14	1.7	LHACIAGHGQLINSISS	90	M	AF259072.1	104176 ... 105099
827	OR8B7P	4	11	137.77	FCVICGWGAHCVAAIFV	71	M	AC069559.8	96224 ... 95292
828	OR11Jn P	3	15	1.82	FSCAGFGSMPLCVSIII	56	M	AF121972.1	171 ... 1109
829	OR4E1P	3	14	1.7	MHACIAGHALLINSISV	92	M	AB030893.1	37 ... 930
830	OR10Dn P	7	11	137.96	.....HHHILLGNVLSI	85	M	AC074177.4	12106 ... 13038
831	ORnP	10	14	1.7	VFRGGFHKFFF.....	23	M	AF102536.1	22 ... 669
832	OR8D2	0	11	137.77	LLVIGVLWVHRLIGNTA	70	M	AC073947.3	29192 ... 30115
833	OR11In P	1	1	126.31	FGAACGCLITLATSVTI	51	M	AL359381.1	175785 ... 176720
834	OR11Jn P	1	15	1.82	FSCACFGWTPLCISIIL	56	M	AF121972.1	171 ... 1109
835	OR10An P	3	11	5.64	MFGVCTPVVQWAGTVVI	74	M	AF247657.1	1 ... 945
836	OR8C3P	5	11	137.77	LCVHCGMGVHCMIVVVV	73	M	AC068905.1 2	76922 ... 75948
837	OR2DnP	6	11	5.64	LLGCCGSVVDITGILI	62	M	AF073987.1	2 ... 649
838	OR4PnP	0	11	51.03	LHGGIVGHSQI.....	59	M	AB030895.1	1 ... 924
839	OR7E21 P	5			MAGGEFIDLHIMPAFGL	50	M	AF073989.1	547 ... 1515
840	OR2M1	0			IVLGCFLDIYAICSMFL	55	M	AF102537.1	16 ... 669
841	OR7AnP	4	19		NLAGVVMNLQM.....	63	M	AF073970.1	41 ... 649

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
842	OR5D11 P	1	8		LCVVTTWCTLFTSANES	44	R	AF010293.1	211 ... 1143
843	OR7E50 P	7	8		IVVCDMLDLHVFLDIFL	57	M	AF102536.1	22 ... 669
844	OR7E45 P	3			MAGGELFDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
845	OR7E77 P	6			MAGGEFLDLHIMPAFGL	51	M	AF073989.1	547 ... 1515
846	OR8B2	0	11	137.77	LLVICAMGAHCVVNIV	84	M	AC069563.9	129775 ... 130725
847	OR8D1	0	11	137.77	LVVVGALSTHALIANTV	87	M	AC073947.3	29192 ... 30115
848	OR8B1P	4	11	137.77	LLLVCGMGAHCVVNIV	84	M	AC069559.8	96224 ... 95292
849	OR7A1P	2	19		MIVVSVVYLQMMTSLGG	72	R	M64376.1	1 ... 999
850	OR7E8P	4	8	13.72	MVACGVLDLHIIDSFGL	53	M	AF102536.1	22 ... 669
851	OR4DnP	7	11	55.86	MHGGVAGHVQLMNNISL	58	M	AC019272.4	183633 ... 182701
852	OR7E80 P	7	8	13.72	MAGGELQDVHIMPAFGL	54	M	AF073989.1	547 ... 1515
853	OR4DnP	5	11	55.86	MHGGGAAGHVQLMNNLTL	62	M	AC019272.4	183633 ... 182701
854	OR7E10 P	8	8	13.72	IVACDLLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
855	OR10B1 P	3	19	17.91	MLGCCLSVIEMILSVVM	85	M	AC012302.5	54283 ... 55224
856	OR2InP	3			.....LLLLMARILL	75	M	AL078630.1	151152 ... 150391
857	OR4Dn	0	11	55.86	MHGGVGGHAQLMNNVSF	65	M	AC019272.4	183633 ... 182701
858	OR5ACn	0			.VVVVIIHVHLIFGIQP	65	R	AF091575.1	52 ... 663
859	OR2I1	0	6	33.63	LLGSCASNAQLMARILL	79	M	AL078630.1	151152 ... 150391
860	OR10H1	0	19	19.86	MFGFSCGMVVAGLVTAL	88	M	AC023604.2	245345 ... 246298

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
861	OR7E59 P	5			CPEARVFLHIMPAFGL	53	M	AF102536.1	22 ... 669
862	OR7E28 P	4			MAGGELLDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
863	OR5B3	0			MVATNGCNIHDLVVNII	51	R	U50948.1	34 ... 978
864	OR2A6	0			TLAHCAFLVPLIACILG	75	M	AF102521.1	22 ... 669
865	OR6Cn	0			.VVVVCAIPPLVMAALI	47	M	NM_010991.1	1 ... 939
866	OR7E54 P	5			MAGGEFLDLHIMPAFGL	52	M	AF073989.1	547 ... 1515
867	OR7E48 P	3			MAGGEFLDLHIMPAFGL	57	R	AF091580.1	7 ... 663
868	OR67An P	3	11	76.42	MHSCAGTLPAQGIASL	83	R	AF091561.1	52 ... 663
869	OR4DnP	1	11	55.86	MHGGVAGHVQLMNNLTL	63	M	AC019272.4	183633 ... 182701
870	OR4CnP	1	11	50.91	VHGCILGHAQLLSICS	57	M	AB030896.1	1 ... 906
871	OR4DnP	2	11	55.86	IHGGIAGHVQLMNNVTI	65	M	AC019272.4	183633 ... 182701
872	OR10H2	0	19	19.94	MFGFSCGMVVAGLVMAL	85	M	AC023604.2	245345 ... 246298
873	OR10H3	0	19	19.94	MFGFSWGMVMGLVTAI	75	M	AC023604.2	214343 ... 213396
874	OR55Cn P	2	11	2.65	VYLLYLQPGGG.....	45	M	AF121980.1	160 ... 1053
875	OR55Bn P	3	11	2.65	.VVVVLQVPLLMCTVS	53	M	AF121980.1	160 ... 1053
876	OR52Vn P	4	11	4.19	LHNHIMVYXFLGTTSP	48	M	NM_013619.1	118 ... 969
877	OR2B3	0	6	33.64	LLGACFINLQLFSILI	75	R	L34074.1	73 ... 1011
878	OR52Tn P	6	11	4.22	FGHFLIFLDFLDILTIS	45	M	AF121975.1	50 ... 1012
879	OR2J1P	5	6	33.64	LLGTCASTLHFLMSFVI	57	R	L34074.1	73 ... 1011
880	OR52Hn P	3	11	4.19	LHFVSGRVPCLGVPTVT	60	M	AF121975.1	50 ... 1012

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
881	OR2J3	0	6	33.64	LLGTCASNLHFLTSFVI	58	R	L34074.1	73 ... 1011
882	OR52An	0			FHSVS.....VVRIFS	75	R	AF079864.1	632 ... 1576
883	OR4Qn	0			.VVVVAGHMQLVNSLSV	56	M	AB030893.1	37 ... 930
884	OR52Bn P	2	11	4.22	LHFVSVRTSILGVPSVL	60	M	AF121975.1	50 ... 1012
885	OR2N1P	9	6	33.64	LHGGCPIYSEALVCMVL	81	M	AJ132195.1	79 ... 906
886	OR51En P	1			FHSASVRFPLLGAIAMV	90	R	AF079864.1	632 ... 1576
887	OR2J2	0	6	33.64	LLGICAILHFLMSFVI	57	R	L34074.1	73 ... 1011
888	OR2In	0			.....RRRRRRMARILR	77	M	AL078630.1	151152 ... 150391
889	OR2J4P	5	6	33.64	LLGTCASNLHFLTSFVL	56	R	L34074.1	73 ... 1011
890	OR7E40 P	4			MAGGDILDLYILPDFGL	55	M	AF073989.1	547 ... 1515
891	OR2H4P	3	6	33.64	LLGAYLTQIQAMASLLM	63	M	AL078630.1	41097 ... 40165
892	OR7E52 P	5			IVVCDVLDLHVCDIFGL	61	M	AF073989.1	547 ... 1515
893	OR2InP	9			LLGSC.....	80	M	AL078630.1	151152 ... 150391
894	OR6C1	0			LIGVFTVIPALGCATLF	52	M	NM_010991.1	1 ... 939
895	OR7E30 P	3			MAGGEFLDLHIMPAFGL	56	M	AF073989.1	547 ... 1515
896	OR5BAn P	0	11	53.69	LVVTSVFNIQNLFVTL	51	R	AF091579.1	7 ... 663
897	OR7H1P	3	19	11.38	MMGGTVLYIQLLVALDV	74	M	AF073989.1	547 ... 1515
898	OR5B2	0	11	54.45	MVATNGCNFHLTSNIF	47	R	U50948.1	34 ... 978
899	OR5AZn P	1	11	53.69	MIGTCTVNLLCILCLIF	48	R	AF091579.1	7 ... 663
900	OR5Bn	0	11	54.45	MVATNGCNIHDLVNI	51	R	U50948.1	34 ... 978

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
901	OR52Bn	0	11	4.22	KILFSARIPSLGAASTL	64	M	NM_013619.1	118 ... 969
902	OR5BnP	2	11	54.45	MAATNICNIHELVANIS	49	R	U50948.1	34 ... 978
903	OR52Dn	0	11	4.19	MHYASVRIPFLGVAAML	66	M	AF121976.2	474 ... 1307
904	OR7A11	1	19	17.72	MVEASAI DLHMMAVLGV	67	M	AF283558.1	1 ... 927
905	OR5BnP	9	11	54.45	MAATSALTVDLLQFFL	41	M	NM_013728.1	1 ... 948
906	OR51AnP	5	11	4.19	THSWFSRMP LLGIVAFV	50	R	AF079864.1	632 ... 1576
907	OR7A15P	4	19	17.72	MIVGSVTHLHMM AALGG	74	R	M64376.1	1 ... 999
908	OR7C2	0	19	17.72	IIGCNGIGLETMTVLGF	98	R	AF091580.1	7 ... 663
909	OR7E23P	7	21	20.89	MAGGELFHLQIMPAFGL	57	M	AF073989.1	547 ... 1515
910	OR2E1	8	6	32.05	AHACCTINLQI.RRRRR	43	M	AL078630.1	106872 ... 105934
911	OR1I1	0	19	17.87	MHGTSAIQIHLIFGVGS	57	R	AF091566.1	1 ... 663
912	OR1RnP	3	17	3.12	MVGISAVHLHLIEGVVA	45	R	M64377.1	1 ... 939
913	OR4F3	0	8	0.07	IHGGMVLHFQFVNSICG	51	M	AB030896.1	1 ... 906
914	OR2AEn	0	7	98.7	HLGGCMGNIHIVSSLLL	49	M	AC073769.1	143294 ... 142353
915	OR2InP	7			.....TTTTT MARILL	72	M	AL078630.1	151152 ... 150391
916	OR52AnP	2			IHSASVRFP LLGXPPPP	94	R	AF079864.1	632 ... 1576
917	OR7C1	0	19		ITGCNGIGLETIATLGI	81	R	AF091580.1	7 ... 663
918	OR2A3P	2	7	149.11	MLAACTCLINLVGGVLG	63	M	AF102521.1	22 ... 669
919	OR7A5	0	19		MIAGNAMY LQMITVLGG	74	M	AF283558.1	1 ... 927
920	OR2InP	3			.....MARILL	67	M	AL078630.1	151152 ... 150391
921	OR7A10	0	19		MLVGNAMNLQMMAVLGG	76	R	M64376.1	1 ... 999
922	OR2An	0			.....	81	M	AF102521.1	22 ... 669
923	OR2M2	0			IISGCFLDIDAICCM LF	57	M	AF102537.1	16 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
924	OR7A8P	2	19		MLAVSSLNLQMIATLGG	71	M	AF283558.1	1 ... 927
925	OR2An	0			TSAVCTTLIHL.....	78	M	L14566.1	62 ... 667
926	OR7E20P	4			MAGGELLFLHIMPAFGL	56	M	AF073989.1	547 ... 1515
927	OR2AnP	3			TLAHTCLVHL.....	65	M	AF102521.1	22 ... 669
928	OR5BHnP	7			MVASC GGKTVS.....	34	M	Y15525.1	1 ... 705
929	OR1En	0			LMGDSLHLHLIMGISI	92	M	AC068902.1 1	196434 ... 195499
930	OR1EnP	1			MLGDSLHLHLIIGVVL	98	M	AF073976.1	32 ... 649
931	OR5Bn	0	11	54.45	FVITSGCNIHNIVVND	51	R	U50948.1	34 ... 978
932	OR8RnP	12	11	73.74	LFLSYGGGAHH.....	52	M	AC069561.1 0	7848 ... 8783
933	OR5ANn	0	11	55.69	YSGLSGTAFAQATLTFGA	55	R	AF091564.1	7 ... 663
934	OR5ANnP	1	11	55.69	YSGLCGTGIQATLTFGT	59	M	Y15525.1	1 ... 705
935	OR5BRnP	8	11	55.69	MSNVCGTVIQATLTFGT	33	M	Y15525.1	1 ... 705
936	OR2A1	0	7	149.18	TLGHCTCLAHLIACFLG	77	M	AF102521.1	22 ... 669
937	OR10An	0	11	6.81	MLGGCFLLVQWAGTIIV	54	M	AF247657.1	1 ... 945
938	OR2A9	3	7	149.18	TLAHTCLVHLIACILG	78	M	AF102521.1	22 ... 669
939	OR2A7	0	7	149.18	TSAVCTTLIHLVGAGLG	81	M	L14566.1	62 ... 667
940	OR10A3	0	11	6.81	MLGGCFSVVQWAGTIVV	58	M	AF247657.1	1 ... 945
941	OR10Cn	0	6	33.36	MLGACSCVGHFIATLIC	59	M	AL365336.1	122764 ... 121784
942	OR7A2P	0	19		MVIVSVMNLQVMAALDG	73	M	AF283558.1	1 ... 927
943	OR10WnP	2	11	54.3	MIGSCASLQLFVAAAIV	47	M	AC012302.5	54283 ... 55224
944	OR7A17	0	19		MVGGSAINSQMMALAG	76	M	AF283558.1	1 ... 927
945	OR5Bn	0	11	54.3	MAATNGINIQDLISNVF	47	M	AF102528.1	52 ... 669
946	OR5BnP	5	11	54.3	MVATNGCNLRDLMSNVL	47	M	AF102528.1	52 ... 669

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
947	OR1Q1	0	9	106.13	TIAVNMLHLHLIEGVIG	54	M	AF073967.1	2 ... 649
948	OR2Hn	0	6	33.33	LLGTCVMQVQSLSSFVV	88	M	AL078630.1	48786 ... 47851
949	OR7EnP	5	3	90.04	MVACDVLDLHIIDSFGL	54	M	AF073989.1	547 ... 1515
950	OR7A14	0	19	17.72	MVIVSAMNI.....	71	M	AC073772.1	227187 ... 226252
951	OR1B1	0	9	106.13	FYGVTLVHLRLIEGLMG	49	M	AC068902.1 1	83719 ... 84647
952	OR12D2	0	6	33.23	LHGSSTIHLHMLVTIAG	81	M	AL359381.1	105330 ... 104407
953	OR7EnP	4	3	11.92	MVACDVLDLHIIDSFGL	55	M	AF073989.1	547 ... 1515
954	OR8BnP	5	15	74.31	LXVVEGMAHCVVVNIV	82	M	AC069559.8	96224 ... 95292
955	OR1L1	0	9	106.13	MLGNSLIHLHLVEGVIT	57	M	AC023167.7	60743 ... 61663
956	OR11An	0	6	33.36	FGATCTSVLVLTLSCLI	76	M	AL359381.1	175785 ... 176720
957	OR7AnP	4	12	44.29	....HLLDCYIRTTLSG	55	M	AF102534.1	52 ... 669
958	OR1C1	0	1	254.35	LVVNSGVHLHLIVGLAT	56	M	AC073769.1	133488 ... 132556
959	OR1D2	0	17	2.99	LVVANLLYIHLTGIFI	50	M	AF073967.1	2 ... 649
960	OR1L3	0	9	106.13	MLGNSFFHLHLAEGSVA	53	M	AC023167.7	14677 ... 15636
961	OR12Dn P	1	6	33.36	LHGSATIHLHMSTGIAG	76	M	AL359381.1	105330 ... 104407
962	OR4G1P	4	16	83.04	KHGGMAIHSQFVNSISG	47	M	AB030896.1	1 ... 906
963	OR2B4P	1	6	33.53	LLGSCGSNVQLLLGLLM	90	M	AL359352.1	95024 ... 95965
964	OR11H1	0	22		FFGTCLCWIPLCLSVIG	61	M	AC027184.3	54955 ... 54017
965	OR4Fn	0	16	83.04	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
966	OR56An P	5	11	4.73	MNLPSFQLPVLQAGFLS	38	M	AF121975.1	50 ... 1012

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
967	OR8NnP	7	4	164.13	REIIRVDAFLKKTANMI	34	M	AF102528.1	52 ... 669
968	OR7EnP	5			MVACDVLDLHIFDFGL	54	R	AF091580.1	7 ... 663
969	OR4Pn	0	11	50.95	LHGGIVGHSQLVNSIAV	56	M	AB030895.1	1 ... 924
970	OR6Cn	0			LIGVFCSTPPLGFATLF	51	M	NM_010991.1	1 ... 939
971	OR5BCnP	2	11	54.3	.....GCQIHFLLANIF	41	M	AC069561.10	51687 ... 50743
972	OR10QnP	4	11	54.3	MLGGCGLLQLLVSVLV	48	M	AC012302.5	54283 ... 55224
973	OR5BnP	6	11	54.3	TDASNGGNIHELVTNIF	45	R	U50948.1	34 ... 978
974	OR10PnP	2	12	115.61	MIGICTTTTHLVATFII	46	M	AF247657.1	1 ... 945
975	OR1L4	0	9	106.22	MMGNSGIHFRLVETVIT	62	M	AF073967.1	2 ... 649
976	OR2APnP	3	12	115.61	YMGAFLLLLLL.....	49	M	AF073987.1	2 ... 649
977	OR1L6	0	9	106.22	MMGNSGIHFRLVETVIT	63	M	AF073967.1	2 ... 649
978	OR6UnP	6	12	115.61	DIGAFTLFMPLDLAALG	52	M	NM_010991.1	1 ... 939
979	OR5C1	0	9	106.06	MAADCAGSVHLLICIQA	50	R	X80671.1	203 ... 1129
980	OR11InP	1	15	70.72	FGAACGCLITLATSVTI	51	M	AL359381.1	175785 ... 176720
981	OR4AnP	6	11	50.78	LYGGVVGHFQVNVGVCV	57	M	AB030896.1	1 ... 906
982	OR4GnP	14	2	114.45	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
983	OR10Vn	0	11	56.15	MVGCGLLPLLLISVLI	48	M	AL136158.14	29455 ... 30402
984	OR4G2P	2	2	114.45	KHGGMAIHSQFVNSISG	48	M	AB030896.1	1 ... 906
985	OR10VnP	3	11	56.15	MIGRCGLLQLLMVSFLV	45	M	X92969.1	8035 ... 8961
986	OR4F4	0	2	114.45	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
987	OR4G3P	14	19	63.51	ICRKMAVHSQFVNSISA	42	M	AB030892.1	1 ... 939
988	OR5AKnP	4	11	52.82	LGATCSMNINFLFVNLC	65	R	U50948.1	34 ... 978
989	OR10YnP	14	11	56.15	MIRGCGLLFLLLCGHHL	43	M	AF247657.1	1 ... 945
990	OR4GnP	2	19	63.51	KHGGMAIHSQFVNSISG	48	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
991	ORnP	9	5	111.92	IMCSRTTYVXQLHGFFT	23	M	AF073989.1	547 ... 1515
992	OR4Fn	0	19	63.51	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
993	OR8A1	0	11	137.56	LLVICVIGIELVSANIV	61	M	AC069559.8	96224 ... 95292
994	OR8Bn	0	11	137.56	LCVVSGMGAHSVVDVM	66	M	AC069559.8	120212 ... 119283
995	OR6DnP	3	10	47.91	AYVSSLLLRTH.....	55	R	AF034901.1	2110 ... 3078
996	OR7E14 P	7	11	16.31	MAGGELDLHIMPAFGL	58	R	AF091580.1	7 ... 663
997	OR2M4	0			IVLGCALDIVALCCMLF	57	M	AF102537.1	16 ... 669
998	OR4WnP	3	X		LLLLL.....LLFFII	36	M	AC069559.8	73704 ... 74636
999	OR4Fn	0	19	63.51	IHGGMVIHSQFVNSLTC	50	M	AC019272.4	62255 ... 61317
1000	OR7EnP	3			MAGGESLDLHIMPAFGL	57	M	AF073989.1	547 ... 1515
1001	OR4GnP	4	19	63.51	KHGGMAIHSQFVNSISG	47	M	AB030896.1	1 ... 906
1002	OR10Jn P	1			LLGVCGITIQSTISVLL	60	M	X92969.1	8035 ... 8961
1003	OR52En	0	11	4.58	MHTASIRMPLLGNILL	71	M	AF121979.1	53 ... 1106
1004	OR4RnP	24	11		VHGAIMGHVXS FANNCL	54	M	AF102522.1	40 ... 660
1005	OR4Cn	0	11		AHGAIVGHIQFVNSICL	75	M	AF102522.1	40 ... 660
1006	OR4AnP	10	11		GLGGIVGHIQL.....	44	M	AF102522.1	40 ... 660
1007	OR4AnP	4	11		LHGGVAGHFQVVGCCI	55	M	AB030895.1	1 ... 924
1008	OR4AnP	8	11		LHGGVAGHSHSVNGICV	54	M	AF102522.1	40 ... 660
1009	OR9Gn	0	11	52.54	FAAYCVGNI IKMLLNVC	46	M	AC074177.4	106297 ... 105361
1010	OR10An	0	12	59.65	MFGSCGSVLQWASTFIF	64	M	AF247657.1	1 ... 945
1011	OR4Cn	0	11		VHRGVVGHIQFINSICL	73	M	AF102522.1	40 ... 660

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1012	OR10Vn P	8	11	56.15	.FFFFIIXNEXSVVVLV	37	M	AC073945.4	110931 ... 111893
1013	OR10Un P	3	12	59.65	MAGLCATVAQLMSFIS	56	R	AF034898.1	1 ... 981
1014	OR7E2P	3	11	90.37	MVACDVLDLHICDIFGL	59	M	AF073989.1	547 ... 1515
1015	OR7E35 P	6	4	11.87	MAGGEFLDLHIVPAFVL	53	M	AF102536.1	22 ... 669
1016	OR9KnP	0	12	59.71	LAIVGGCSLQVSLSIIP	49	R	AF091579.1	7 ... 663
1017	OR7E13 P	5	11	90.37	MAGGEFLDLHIMLAFGL	54	R	AF091580.1	7 ... 663
1018	OR7EnP	4	8	6.5	MLACGVLDLHIIDSFGL	55	M	AF102536.1	22 ... 669
1019	OR9Kn	0	12	59.71	LAIVGGCSIQMSLSIIP	49	M	NM_013728. 1	1 ... 948
1020	ORnP	13	11	137.56	PCVIYGIDVHSLXEPAY	34	M	AC069559.8	36251 ... 35322
1021	OR7EnP	8	11	72.11	MAGGNLFFSLLMPAFGL	54	M	AF073989.1	547 ... 1515
1022	OR7EnP	5	3	140.64	MAGGKFLDLHIMPAFGL	53	M	AF073989.1	547 ... 1515
1023	OR3A4P	0	17	3.12	LHAGCMFNTQALAAMGA	44	M	AC073769.1	133488 ... 132556
1024	OR8QnP	9	11	137.56	LSIIIVETEFVFTXIVT	33	M	AC069559.8	137090 ... 138039
1025	OR7EnP	2	11	72.11	ILACGVLDLHIMHNFGL	55	M	AF073989.1	547 ... 1515
1026	OR7EnP	3	3	140.64	MVACGVLDLHIIHSFGL	56	M	AF073989.1	547 ... 1515
1027	OR3A1	0	17	3.07	LHVGCACNTHALVGMAT	50	M	AF073967.1	2 ... 649
1028	OR5Gn	0	11	52.52	MGEACGMSTHFLAIGL	69	M	AF146372.1	509 ... 1456
1029	OR5MnP	7	4	42.45	LIIIVYVNAQRIIIMLE	39	M	AF073987.1	2 ... 649
1030	OR7EnP	1	3	136.02	MVACDVLDLHIIDNFGL	54	M	AF073989.1	547 ... 1515
1031	OR5G1P	2	11	52.51	QGVACGINTHNVVAVGF	68	M	AF146372.1	509 ... 1456
1032	OR5PnP	3	11	6.93	LVGTCAGNSFCPSSVLS	70	M	AF121977.1	262 ... 1197

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1033	OR10AEnP	8	1	157.36	IIIIIGIMVIVQIHCVV	40	M	X92969.1	8035 ... 8961
1034	OR3A2	0	17	3.07	LHAGCACNTHALVGMAT	50	M	AC073769.1	133488 ... 132556
1035	OR10Jn	0	1	157.4	MVATCGIMLHANVSVIV	88	M	X92969.1	8035 ... 8961
1036	OR1D3P	2	17	2.94	LVVANLFYIHLTLTGIFI	50	R	Y07557.1	1 ... 942
1037	OR10Jn	0	1	157.36	TVAICGIMVQSNVRVIV	72	M	X92969.1	8035 ... 8961
1038	OR1D4	0	17	2.99	LVVTNLLYLLLLTGIFT	49	R	Y07557.1	1 ... 942
1039	OR5GnP	8	11	52.51	QGVVYVANTHAVVAVLV	55	M	NM_013728. 1	1 ... 948
1040	OR4SnP	1	11	50.99	LHGCIGGHIQLVNSIAG	61	M	AB030895.1	1 ... 924
1041	OR5GnP	4	11	52.51	LGVVCGVSTHFLVLGL	75	M	AF146372.1	509 ... 1456
1042	OR9HnP	2	1	254.35	FSGIAGWNAQMLLCIIS	59	R	AF091579.1	7 ... 663
1043	OR1A1	0	17	2.99	MIGNSGINPHLMGVIFV	86	M	AF073966.1	41 ... 643
1044	OR1A2	0	17	2.99	MIAKSGISPHMLGVFL	80	M	AF073966.1	41 ... 643
1045	OR8AnP	6	11	137.68	FLVICVMVIELVFANLI	50	M	AC069561.1 0	51687 ... 50743
1046	OR1P1P	1	17	2.99	LLGDIALLTRLLLGVII	82	M	AF102538.1	139 ... 675
1047	OR7E12 P	7	11	1.92	MAGGEFFSLHIMPAFGL	55	M	AF073989.1	547 ... 1515
1048	OR4A1P	4	11		LHGGVVGHFQVVGICV	57	M	AB030896.1	1 ... 906
1049	OR10G3	0	14	1.7	LHGSCGAHLQLTDIVVS	91	M	AF259072.1	19582 ... 18644
1050	OR10G1 P	3	14	1.7	LHGSCGAHIQLTDIVAS	93	M	AF259072.1	55611 ... 54658
1051	OR10G2	0	14	1.7	LHGSCGAHIQLTDVVAS	91	M	AF259072.1	55611 ... 54658
1052	OR5Tn	0	11	51.94	MVGTCAAHIHALFVIEV	52	M	AF121977.1	262 ... 1197
1053	OR7EnP	8	3	136.02	MVACGVLDLHIIGSFGL	53	R	AF091580.1	7 ... 663
1054	OR7EnP	5	3	136.02	MAGGKFLDLHIMPAFGL	54	M	AF073989.1	547 ... 1515
1055	OR4AnP	2	11	50.93	LHAGVVGHVQFMNGICV	61	M	AB030895.1	1 ... 924
1056	OR4C1	1	11	50.93	LHGGIIGHVQFVNSMCL	66	M	AB030896.1	1 ... 906

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1057	OR1EnP	7	17	2.9	.....MMMYTLIMGILI	80	M	AF073961.1	32 ... 649
1058	OR7KnP	11	14	5.99	MIGCNFIELYMMIGIFG	49	R	AF091580.1	7 ... 663
1059	OR4CnP	3	11	50.93	LHDGIEGHIQFVNSMCA	61	M	AF102522.1	40 ... 660
1060	OR1RnP	11	17	2.9	MVGISAVHLHLIEGVVA	44	R	M64377.1	1 ... 939
1061	OR5AUn	0	14	1.22	MAATCGANIHLCLFANLS	51	M	AC069559.8	85584 ... 84655
1062	OR4Cn	0	11	50.96	LHAGVVGHIQFVNSICI	69	M	AF102522.1	40 ... 660
1063	OR4Cn	0	11	50.96	VHGCI VGHVQLLSICV	57	M	AB030895.1	1 ... 924
1064	OR13Dn P	2	9	86.89	MLGSCWITLRLFTVIVL	58	M	AJ251154.1	2703 ... 1747
1065	OR5n				ASASLTSYVHNEEEVFV	44	M	AL359352.1	111313 ... 112242
1066	OR2Hn				LLGTCVMQVQSLSSLVV	83	M	AL078630.1	48786 ... 47851
1067	ORn				.....	25	M	AC074177.4	88434 ... 88916
1068	ORn				.....EINLLLARGKAL	29	M	AF283814.1	1 ... 930
1069	ORn				NNNNNFXSLHLCCCILI	29	M	AC074177.4	128803 ... 129726
1070	ORn				TLLLLTFQHHL.....	27	M	L14569.1	62 ... 667
1071	OR6Fn				..CCCWPIPTSAIAVIS	46	R	M64386.1	130 ... 975
1072	ORn				.....ILLLLL	33	R	U50947.1	418 ... 1350
1073	ORn				..CCCLIPFFFTSGYSW	24	R	M64392.1	1 ... 942
1074	OR10An				PLGECDEEQMYVGLVM	51	M	AF247657.1	1 ... 945
1075	ORn				IPNASRRRRRR....PP	25	R	M64388.1	1 ... 942
1076	OR2Ln				FLAGAGINAHYVSTFLF	51	M	AF102527.1	22 ... 669
1077	OR10Jn				LTGICGIMVQSNVSVLL	57	M	X92969.1	8035 ... 8961
1078	OR1Kn				LLLLLMVNLYLIKGVVT	50	R	M64377.1	1 ... 939
1079	OR10Dn				LHGSCGLHILLSNVISG	69	M	AC074177.4	12106 ... 13038
1080	ORn				.....CCCI III	41	R	M64376.1	1 ... 999

SEQ ID #	Symbol	D	C	Mb coord	CDR	%	S	Acc	Range
1081	OR2Ln				SLACGGLNAHFVRTLSF	52	M	AF102537.1	16 ... 669
1082	ORn				HHHHHRLESSSLLLLLL	38	M	AC073945.4	152209 ... 153150
1083	ORn				.....LLLLLS	27	M	AL365336.1	41087 ... 41711
1084	OR2n				.....GGGGGG	57	M	AF102521.1	22 ... 669

5 Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be apparent to those skilled in the art that various changes and modifications can be practiced without departing from the spirit of the invention. Therefore the foregoing descriptions and examples should not be construed as limiting the scope of the invention.

10

All patents, patent applications, and publications cited herein are hereby incorporated by reference in their entirety. In particular, the following documents are hereby incorporated by reference in their entirety: United States Provisional Patent Applications Serial Nos. 60/145,412, filed July 23, 1999; 60/155,126, filed September 22, 1999; 60/158,495, filed October 8, 1999; 60/158,615, filed October 8, 1999; 60/181,113, filed February 8, 2000; 60/181,115, filed February 8, 2000; 60/184,809, filed February 24, 2000; 60/188,332, filed March 9, 2000; and United States Patent Applications Serial Nos. 09/620,753, filed July 21, 2000; and 09/621,122, filed July 21, 2000.

CLAIMS

What is claimed is:

- 5 1. An isolated and purified polynucleotide sequence encoding an olfactory receptor and having the nucleotide sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a nucleotide sequence that is at least about 95% homologous to a nucleotide sequence of the group consisting of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through
10 SEQ ID NO:152 and encoding a polypeptide having olfactory receptor function.
2. An expression vector comprising a polynucleotide sequence of claim 1.
3. A host cell comprising the expression vector of claim 2.
- 15 4. An isolated and purified olfactory receptor polypeptide comprising the translated sequence of SEQ ID NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of the translated sequence of SEQ ID
20 NO:1 through SEQ ID NO: 73 and SEQ ID NO:111 through SEQ ID NO:152 and having olfactory receptor function.
5. A host cell expressing a polypeptide of claim 4 or a functional fragment thereof.
- 25 6. A phage expressing a polypeptide of claim 4 or a functional fragment thereof.
7. A preparation containing a polypeptide of claim 4, further comprising
30 biological or synthetic molecules which maintain the functional structure of the polypeptide.

8. An isolated and purified polynucleotide sequence encoding an olfactory receptor and having the nucleotide sequence selected from the group consisting of SEQ ID NO: 153 through SEQ ID NO: 1084 or a nucleotide sequence having a sequence at least about 95% homologous to a nucleotide sequence of the group consisting of SEQ ID NO: 153 through SEQ ID NO: 1084 and encoding a polypeptide having olfactory receptor function.
9. An expression vector comprising a polynucleotide sequence of claim 8.
10. A host cell comprising the expression vector of claim 9.
11. An isolated and purified olfactory receptor polypeptide comprising the sequence of SEQ ID NO: 1085 through SEQ ID NO: 2008, or a polypeptide sequence that is at least about 95% homologous to a polypeptide sequence of the group consisting of SEQ ID NO: 1085 through SEQ ID NO: 2008 and having olfactory receptor function.
12. A host cell expressing a polypeptide of claim 11 or a functional fragment thereof.
13. A phage expressing a polypeptide of claim 11 or a functional fragment thereof.
14. A preparation containing a polypeptide of claim 11, further comprising biological or synthetic molecules which maintain the functional structure of the polypeptide.
15. A library of olfactory receptors suitable for determining the interaction pattern of a composition with the receptors, comprising the expression products of at least two polynucleotides of SEQ ID NO: 1 through SEQ ID NO: 73, SEQ ID NO: 111 through SEQ ID NO: 152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

16. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 50 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through
5 SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

17. A library of olfactory receptors according to claim 15, wherein the library comprises the expression products of at least 100 polynucleotides of SEQ ID NO:1 through
10 SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

18. A library of olfactory receptors according to claim 15, wherein the library
15 comprises the expression products of at least 200 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

19. A library of olfactory receptors according to claim 15, wherein the library
20 comprises the expression products of at least 500 polynucleotides of SEQ ID NO:1 through SEQ ID NO: 73, SEQ ID NO:111 through SEQ ID NO:152, and SEQ ID NO: 153 through SEQ ID NO: 1084 wherein said polynucleotides encode functional olfactory receptors; or functional fragments of said expression products.

20. A library of olfactory receptors suitable for determining the interaction
25 pattern of a composition with the receptors, comprising at least two polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008, wherein said polypeptides are functional olfactory receptors; or functional fragments of said polypeptides.

21. A library of olfactory receptors according to claim 20, wherein the library
30 comprises at least 50 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,

wherein said polypeptides are functional olfactory receptors; or functional fragments of said polypeptides.

22. A library of olfactory receptors according to claim 20, wherein the library
5 comprises at least 100 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,
wherein said polypeptides are functional olfactory receptors; or functional fragments of
said polypeptides.

23. A library of olfactory receptors according to claim 20, wherein the library
10 comprises at least 200 polypeptides of SEQ ID NOS of SEQ ID NO: 1085 through SEQ
ID NO: 2008, wherein said polypeptides are functional olfactory receptors; or functional
fragments of said polypeptides.

24. A library of olfactory receptors according to claim 20, wherein the library
15 comprises at least 500 polypeptides of SEQ ID NO: 1085 through SEQ ID NO: 2008,
wherein said polypeptides are functional olfactory receptors; or functional fragments of
said polypeptides.

25. A method for determining the binding pattern of a composition with
20 olfactory receptors, comprising the steps of:
exposing the composition to a library according to claim 21; and
determining whether the composition binds to each olfactory receptor, thereby
determining the overall binding patter of the composition.

26. The method of claim 25, wherein the composition consists essentially of one
25 compound or chemical.

27. The method of claim 25, wherein the composition comprises at least two
30 compounds or chemicals.

28. The method of claim 25, wherein the step of determining whether the
composition binds to each olfactory receptor further comprises a determination of the

approximate binding constant with which the composition binds to each receptor or functional fragment thereof.

29. The method of claim 25, further comprising the step of determining whether
5 a receptor or functional fragment thereof to which the composition binds is activated.

30. The method of claim 29, further comprising the step of determining the absolute or relative amount by which the receptor or functional fragment thereof is activated.

10

31. A DNA array or a DNA chip comprising DNA segments derived from SEQ ID NO: 153 through SEQ ID NO: 1084.

32. A method of determining differences among individuals with respect to their
15 olfactory faculties, comprising the steps of comparing the olfactory DNA of the individual against the array or chip of claim 31.

33. A method to determine single nucleotide polymorphisms in olfactory receptors, comprising the steps of uniquely amplifying olfactory receptor sequences from DNA
20 obtained from one or more individuals, based on primers designed according to the first 25 bases and the last 25 bases of any combination of, or each of, SEQ ID NO: 153 through SEQ ID NO: 1084, and determining the similarities and differences between said amplified DNA and the corresponding receptor from SEQ ID NO: 153 through SEQ ID NO: 1084.

FIGURE 1

SEQ. ID NO:1

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1 GGNNTTATNCC NCGTTGNACT GCAGGGGNNC AACNCACAGN ACGCCCGNTG CTGAGGCTAT AAATGANCGG
71 NTTAAGGAGA GGAGTGAAGA CAGTAAAAAA ACACAGAGAT AAATTTATCA ATTGGGAAGC TTTCAAAGGG
141 CCAAATATAG ATGAATATTA ATGGGCCAAA GAAGAGAAGC ACAACAGTAA TGTGGGCAGA CAGAGTGGA
211 AGGGCCTTGG ACATCCCATC AGAGGCTTGG CGATGCACAG TAGCAAGGAT GATAGTGTCA GAAATGAGCA
281 AAAGGAGGAA ACACATAAGT GAGAGCAGAC CACTGTTAGT GAGCACCAGT ATCTCAAAAC CATAGGTGTC
351 TAAGCAGGCA AGCTTGATCA CTAGGAGGAG GTCACAGAAA AAATTGTCTA CCCTGTTGGG TCCACAGAAA
421 GGCAGATTGA CTTTGAATGC CAGGTGGGTG GCTGAGTGTG AGATGCCAAT GGCCAGGAA ACCCCACCA
491 GAACAGTTCA CACCCTCCGG TTCATGATGG TTATGTAGTG CAGAGGTTTG CATATAGCAA TGTATCTATC
561 ATAGGCCATG GCAACAAGAA GCACCATCTC ACTACCCCA AAAACATGCA AGN

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SEQ. ID NO:2

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1 GGNNTNTNAC ACGGACTCCA AGCAGTGGTA ACAACGCAGA GTACGCCCGT TCCTGAGTGA GTAGATGAAG
71 GGGTTCAGCA TGGGATTGAT GACAGTGTG AAAATTCCAA CAGCTTTATC CTTGTCTGAA AGCTTGGTTG
141 AACCAGTCG CATATAGTTA AAGATACCTG AACCATAGAA TATGGCAACC ACAGTGAGGT GGGAGCCACA
211 TGTGGAGAAG GCTTCTTCC TGCCCTCTAC AGAGCGAATT CGCAGGACTG CAGCTGCCAC GTGGATATAG
281 GAGATGACAA TGAGAGCCAT GGGGGTACCT GCCATTATAA AACCACAGC AAAAAGCAGC AGCTCATTGA
351 GTTGGGTGCT GGAGCAGGAG AGCTGGAAGA GCTGTGGGAG GTCACAGTAG AAGTGATTGA TCACATTGGG
421 GCCACAGAAG TTGAGCGTGG ACATGGCCAC AGTGTGGGTC AGTGCGTTGG TGAAAGCACA AGCCAGGAC
491 GCAGCCACCA ACATCCTCTG GACTGTCTGA CTCATGCGGG TGCTTGTAGG TGAGGGGCC GGCAGATGGG
561 CAGGAATCGG TCATAGGG

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SEQ. ID NO:3

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1 TGGNNTTTTA TCNCCNTTGG AGCTCCNAAG CAGTGGTAAC AACGCAGAGT ACGCCCGTTG CGAAGCGTGT
71 AGATTAGGGG GTTCAGTAGG GGAGTGATGA CAGTGTAGGT CACCGAGATC AGCTGGTCAT GTTCTCTGGT
141 GTTCTCTGAC TTGGGCTTGA GGTAGGCAAT GGAGGCACAG CTGTAGTGGA CAATGACCAC AGTGAGGTGG
211 GATGCACAGG TGGCAAAAGC CTTCTTCCGG CCCTCAACTG AAGTAATCTT GAGGATTGTA GAGATAATGA
281 GAACATAAGA AATGAAAACC AGACCCATAG GTACAACAAG CACCAGCACA CTGATAATCA AAGTCAGGAT
351 TTCATTGACA GTGGTGTCAA TGCAGGAGAG CTTTCATCACA GGGCGGATGT CACAGAAGAA GTGGGGCACC
421 TTTTCTAGCA CAGAAGGGTA ACCTGAATAC AGATGTCACT TGCCTTATTG CTACAATCAG CCAATGCTG
491 CAAGGCCCCC AGGACAAGTT GGATACGCAG CCTCTTGTTT ATAATAACCA TGTATCTCAA GGGGGTTGCA
561 AGATGGCCAC ATAGCNGNTC ATATTCCN

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SEQ. ID NO:4

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1 GTNGTTNTTA ACNCCATTGG AGCTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCCCAA TGTATTTTTT
71 TTTGAGAAAC TTGTCTTTCT TAGATTTTTG TTACATCTCT GTCACAATTC CAAAATCTAT TGTTAGTTCC
141 TTGACTCATG ATACTTCCAT TTCTTTCTTT GGGTGTGCTC TGCAAGCCTT CTTTTTCATG GACTTGCAA
211 CTACGGAGGT AGCCATCCTT ACAGTGATGT CCTGTGACCG CTATATGGCC ATCTGCCGGC CTTTACATTA
281 TGAGGTCATC ATAAACCAAG GTGTCTGTCT GAGGATGATG GCCATGTCGT GGCTCAGTGG GGTGATCTGT
351 GGATTCATGC ATGTGATAGC AACATTCTCA TTACCATTCT GTGGGCGCAA TAGAATACGT CAATTTTTCT
421 GTAATATTCC ACAACTNCTA AGCCTCTTAG ACCCAAAGT AATTACCATT GAGATTGGAG TCATNGGNTT
491 TTGGTACAAG TCTTNGATA ATCCTCTTTG NTGNAATTAC TCTCTCCTAC ATGTNCATTT TTTTTTGNCA
561 TCATGAGGGA TTCCTTCTAA AGG

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SEQ. ID NO:5

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1 GNNGNTTNTT NCCNCCNTTG GACTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCGTGT GTAAATGAAT
71 GGGTTCAACA TGGGAGTCAT AACAGTGTAG GACAATGATA GCAGCTTCGT GCCCTCAGGT GAATTATTTG
141 ATTTAGGCCG GAAGTAGGTG AGGCTTAATG ATATATAGAA AAGAGAGACA ACAAGGAGGT GTGAGGAACA
211 TGTAAGAAAAG GCTTTATTCT TCCCTTTAGC TGATGGGATC TTGAGGATGG CAGCAGCAAT GCGAGTATAG
281 GAACACAAGA TCAGCAAGCA GGGGATCATG ACCACCAGAA TGGTTCCGAC GATGGCGTAG ATCTCAACA
351 GTGCTGTGTC TGCACAGACC AGCCTCAGCA CAGGTGGGCT GTCACAGAAG AAGTGTTTCA CCTTGTGGT
421 GCCACAGAAT GGAAGACTGA AGAGCCATGT GGTCTGCACA GTAGCTACAG GAAAGCCTGG GAACCAGGAG
491 GCAGCAGCCA GTTTGGCAGC AGTCCTTTGG TTCATGATGA CTGGGTAGTG CAAGGGACTN GCAGATNNNC

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561 NCATTCGGTC ATATGNCATG GNAG

SEQ. ID NO:6

1 CNTTGGAGCT CCAAAGCAGT GGTAACAACG CAGAGTACGC CCGCTCCGCA GAGAATAGAT GAAAGGGTTT
71 AGGGTCGGGG GCACGACTGT GTAGAACGCA GACAGGAAAA CATCCAGAAC GGGGGGAGAA TTTGAAATTG
141 GCTTCACATA GGCAATGCTG CCAGATATCA TAAAGAGTGT TACAACCACA AGATGTGGAA TGCAGGTAGA
211 AAATGTTTTT GATCTACCCT CCTTAGAAGG AATCCTCATG ATGACAGAAA AAATGTACAT GTAGGAGAGA
281 GTAATTACAA CAAAGGAGAT TATCACAAGA CTTGTACCAA AAACCATGAC TCCAATCTCA ATGGTAATTA
351 CTTTGGGGTC TAAGAGGCTT AGGAGTTTGT GGAATATTAC AGAAAAATTG ACGTATTCTA TTGCGCCAC
421 AGAATGGTAA TGAGAATGTT GCTATCACAT GCATGAATCC ACAGATCACC CCACTGAGCC ACGACATGGC
491 CATCATCCTC AGACAGACAC CTTGGTTTAT GATGACCTCA TAATGTAAAG GCCGGCAGGA TGGCCATATA
561 GCGGTCATAG GA

SEQ. ID NO:7

1 GCAGTGGTAA CAACGCAGAG TACCGCCCCC TATGTACTTT TTCTTGGGAA ACTTGTCTGT GTTTGACATG
71 GGTTTCTCCT CAGTGACTTG TCCCAAAATG CTGCTCTACC TTATGGGGCT GGGCCGACTC ATCTCCTACA
141 AAGACTGTGT CTGCCAGCTT TTCTTCTTCC ATTTCCCTCGG GAGCATTGAG TGCTTCTTGT TTACGGTGAT
211 GGCCTATGAC CGCTTCACTG CCATCTGTTA TCCTCTGCGA TACACAGTCA TCATGAACCC AAGGATCTGT
281 GTGGCCCTGG CTGTGGGCAC ATGGCTGTTA GGGTGCATT CATTCCAGTAT CTTGACCTCC CTCACCTTCA
351 CCTTGCCACA CTGTGGTCCC AATGAAGTGG ATCACTTCTT CTGTGACATT CCAGCACTGT TGCCCTTGCC
421 CTGTGCTGAC ACATCCTTAG CCCAGAGGGT GAGCTTCACC AACGTTGGCC TCATATCTCT GGCTGCTTTC
491 TGCTAAATCT TTTATCCTAC ACTAGAATCA CAAATATCTA TCTTAAGCAT TCGTACAAC

SEQ. ID NO:8

1 GGAACAACGC AGAGTCGCCC CCGATGTACT TGTTCCTTCTC CAACCTGTCC TTTGCTGACA TTTGTGTTAC
71 TTCCACCACC ATTCCAAAAA TGCTGATGAA CATCCAGACA CAGAACAAAG TCATCACCTA CATAGCCTGC
141 CTCATGCAGA TGTATTTTTT CATACTCTTT GCTGGATTTG AAAACTTCCT CCTGTCCGTG ATGGCCTATG
211 ACCGGTTTGT GGCCATCTGT CACCCCTGTC ACTACATGGT CATTATGAAC CCTCACCTCT GTGGACTGCT
281 GGTTCTGGCA TCCTGGACCA TGAGTGCTCT GTATTCCTTG CTACAAATCT TAATGGTAGT ACGACTGTCC
351 TTCTGCACAG CCTTAGAAAT CCCCCACTTT TTCTGTGAAC TTAATCAGGT CATCCAACCT GCTTGTCTCTG
421 ATAGCTTTCT TAATCACATG GTGATATATT TTACAGTTTG CGCTGCTGGG TGGAGGTCCC TGACTGGGAT
491 CCTTTACTTC TTAATCTAAG ATAATTTCTT CATACTGCA ATCTCANCA GNTCAGGG

SEQ. ID NO:9

1 GGGTTTTNAC CCNNTNGGAG CTCCNAGCAG TGGAACAAC GCAGAGTACG CCCGTTTCGT AGGCTATAAA
71 TGAAGGGGTT GAGTGAGGGA GTCACCACTC CATAGAAGAG GGCCATGAAC TTGGGTTGAT CCCTTGAGAT
141 GGAGGAGGGG GGCTGAAGGT ACATGCTGAT GGCTGGGCCA TAAAATAAGA AAATAACAAT AAGATGGGAG
211 GAGCATGTCC CAAAGGCCTT TNTCCTTCCC TTGGAAGATT TGATCTTAAA TACAGCACTT NCAATACTAG
281 CATAGGAAGC AAGAATTAAG CATANTGGGA CAGCTAACAT AAAAATGCAT ACCACAGAGA GTGTGAGCTC
351 GTTAGAACCC TTTTCACCAC AGGCAATCTT TATCAGAACA GGAATCTCAC ACACCAAGTG GTCCAGCTTA
421 TTGAGACCAC ACAGTGGNAA TTTGTATTGT GGCAGTGGCC CTCTGAGAAC GGCATAGATT ATACCAANTT
491 AACCACNACN GCGGNAACTA ANGATTGAGA CGCNCCTGGAT TCATGATGAG GGTNTAGTGA AGAGGTTNTC
561 AGAATGGCCA CATACCGNTC AAA

SEQ. ID NO:10

1 GCTGCTNCCA GCAGTGGTAA CAACGCANAG TACGCCCCCA ATGTATTTGT TCTTCGGCCA TCTGTCTCTC
71 CTGGATGTCT GCTTCATCAC CACTACCATC CCACAGATGT TGATCCACCT CGTGGTCAGG GACCACATTG
141 TCTCCTTTGT ATGTTGCATG ACCCAGATGT ACTNTGTCTT CTGTGTTGGT GTGGCCGAGA GCATCCTCTT
211 GGCTTTCATG GCCTATGACC GNTATGNTGC TATCTGCTAC CCACTTAACT ATGTCCCGAT CATAAGCCAT
281 AAGGTCTGTG TCAGGCTTGT GGGAACTGCC TGGNTCTTTG GGCTGATCAA TGGCATCTTT NTCGGGTATA
351 TTTCATTCTT AGAGCCCTTC CGCAGAGACA ACCACATAGA AAGCTTCTTC TGCGAGGCCC CCAATAGTAT
421 TTGGCCTCTT TTGTGGGGGA CCCTNANANT AGTCTGTGGG CAAATCTTTN GCCGATGCCA TCGTGGTAAT
491 TCTNAGNCCC ATNGGTGCTN ACTGNTACTT ACCTATNTGC ACATTCTCTG CCACCATCCT AGNNAAAGTC
561 CTCCTTCTN

SEQ. ID NO:11

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1 GGNNTTTTAC CNCNATTGGA GCTCCAAAGC AGTGGTAACA ACGCAGAGTA CGCCCCCTAT GTACTTGTTT
71 TTGAGAAACT TGTCTTTCTT AGATTTTGTG TACATCTCTG TCACAATTCC AAAATCTATT GTTAGTTCTT
141 TGACTCATGA TACTTCCATT TCTTTCTTTG GGTGTGCTCT GCAAGCCTTC TTTTTCATGG ACTTGGCAAC
211 TACGGAGGTA GCCATCCTTA CAGTGATGTC CTATGACCGC TATATGGCCA TCTGCCGGCC TTTACATTAT
281 GAGGTCATCA TAAGCCAAGG TGTCTGTCTG AGGATGATGG CCATGTCGTG GCTCAGTGGG GTGATCTGTG
351 GATTCATGCA TGTGATAGCA ACATTCTCAT TACCATTCTG TGGGCGCAAT AGAATACGTC AATTTTTCTG
421 TAATATTCCA CAGCTCCTAA GCCTCTTAGA CCCCAAAGTA ATTACCATTG AGATTGGAGT CATGGTTTTT
491 GGTACAAGGC TTNGGATAAT CTNCTTTGGT GNAATTACTC TCTCCTACAT GTACATTTTT TCTGCATCAT
561 GAGGATTTCCT TCTAAGGAGG GG

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SEQ. ID NO:12

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1 GGNNTTGGACC ACGGAGCTCC AAGCAGTGGT AACAAACGAG AGTACGCCCT CTTGTCCTCG TGCCGATACA
71 TGATGGGGTT CAACATGGGA GTCATAACAG TGTAGGACAA TGATAGCAGC TTCTTGCCCT CAGGTGAATT
141 ATTTGATTTA GGCCGGAAGT AGGTGAGGCT TAATGATATA TAGAAAAGAG AGACAACAAG GAGGTGTGAG
211 GAACATGTAG AAAAGGCTTT ATTCTTCCCT TTAGCTGATG GGATCTTGAG GATGGCAGCA GCAATGTGAG
281 TATAGGAACA CAAGATCAGC AAGCAGGGGA TCATGACCAC CAGAATGGTT CCGACGATGG CGTAGATCTC
351 AAAGAGTGCT GTGTCTGCAC AGACCAGCCT CAGNACAGGT GGGCTGTAC AGAAGAAGTG GTTCACCTTG
421 TTGGTGCCAC AGAATGGAAA ACTGAAGAGC CATGTGGTCT GCACAGTAGC TACAGGAAAG CCTGGGAACC
491 AGGAGGTAGC AGCCAGTTTG CACGAGTCCC TTTGGTTNAT GAATGACTGG GGTAGTGCAA GGGACTGCAG
561 ATGGCCACAT ANCGGTCNT

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SEQ. ID NO:13

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1 GNNNTTNNNN CCACTGGAGC TCCAAAGCAG TGGAACAAC GCAGAGTACG CCCCCAATGT ATTTATTCTT
71 GCTCACCTCT CCTTAGTTGA TATCTGTTTT ACCACCAGTA TTGTCCCCCA GCTGCTGTGG AACCTAAAAG
141 GACCTGACAA AACAATCACA TTCCTGGGTT GTGTCTATCA GCTCTACATC TCCCTGGCAT TGGGCTCCAC
211 TGAGTGTGTC CTCCTGGCTG TAATGGCTTT TGATCGCTAT GCTGCAGTTT GCAAACCTCT CCACTATACC
281 GCCGTAATGA ACCCTCAGCT GTGCCAGGCT CTGGCAGGGG TTGCGTGGCT GAGTGGAGTG GGAAACACTC
351 TTATCCAGGG CACTGTCACC CTCTGGCTTC CTCGCTGTGG ACACCGATTG CACTAACATT TCTTCGTGAG
421 GTACCCTCCA TGATTAAGCT TGCAATGTGTG GACATCCATG ATAATGAGGT TCAGCTCTTT GTTGCTTCAC
491 TGGTCTTGCT CCTCTTGCCC TTAGTGCTAA TACTGCTGCC TATGGACATA TAGCCAAGGT GGCATAAGGA
561 TCAAGTCAGT CCAGCCT

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SEQ. ID NO:14

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1 GGNNTNTNAC TCCATGGACT CCAAGCAGTG GTAACAACGC AGAGTACGCC CATAATGAT GGGGTTTCAGT
71 AGGGGAGTGA TGACAGTGTA GGTACCGAG ATCAGCTGGT CATGTTCTCT GGTGTTCTCT GACTTGGGCT
141 TGAGGTAGGC AATGGAGGCA CAGCTGTAGT GGACAATGAC CACAGTGAGG TGGGATGCAC AGGTGGCAAA
211 AGCCTTCTTC CGGCCCTCAA CTGAAGCAAT CTTGAGGATT GNAGAGATAA TGAGAACATA AGAAATGAAA
281 ACCAGACCCA TAGGTACAAC AAGCACCAGC AACTGATAA TCAAAGTCAG GATTTTCATTG ACAGTGGTGT
351 CAATGCAGGA GAGCTTCATC ACAGNGCGGA TGTCACAGAA GAAGTGGGGC ACCTTTCTAG CACAGAAGGG
421 TAACCTGAAT ACAGATGTCA CTTGCGTTAT TGCTACAATC AGCCCAATGC TGCNGGCCCC CAGGACAAAGT
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561 ANACCATTGC TGNGAGC

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SEQ. ID NO:15

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1 GNCNTNTTAA ACNCCATTGG AGCTCCAAAG CAGTGGTAAC AACGCAGAGT ACGCCCATTA CGAAAAGTGT
71 AGATGAAGGG GTTCAAGAGG GGTGTGATGA TGCAGCTCAG GACGGAGGCA CCTTTGTTGA GCAGTTTGA
141 CTGAGCCTCT GACATACGAA TGTAAGAGAA GATGGAACGT CCATAGATGA TGACCACCAC TGTAAGATGC
211 GAGGCGCAAG TGGAAAACGC TTTCCTTCGC TCAGCAGCTG TAGGGGCCCT GAGAACAGTG GCAAGAATGC
281 AGGCATAGGA AACTGAGGTC AGAGCCAGTG AGCCAGTAA CACCAACGTA GAGAGCATGA AAGCCACCAG
351 TTTCAGCAGG TGGGTGTCCC CACAAGAAAAG CCTGAGCAAG GGCCAACTGT CACGAAAGAA GTGGTCAATA
421 CCATTGNGGC CACAGAAAGG CATGGCTGGC CATGAGGACA GTGGGGGAAA GGACCCAGAG GAATNCANCT
491 AGCCAGGAGG CCACACTAGT TTGTGAACAG ACATGGCCAT TNATTAGGGT CTCATAGCGG AGTTGTGNC
561 AGATTTGCNT GGTNACGATT CAN

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SEQ. ID NO:16

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1 GGNNTTTTAC CNCNATTGGA CTCCAAAGCA GTGGTAACAA CGCAGAGTAC GCCCCCTATG TATTTATTCT
71 TGCTCACCTC TCCTTAGTTG ATATCTGTTT TACCACCAGT ATTGTCCCCC AGCTGCTGTG GAACCTAAAA
141 GGACCTGACA AAACAATCAC ATTCTGGGT TGTGTCAATC AGCTCTACAT CTCCCTGGCA TTGGGCTCCA
211 CTGAGTGTGT CCTCCTGGCT GTAATGGCTT TTGATCGCTG TGCTGCAGTT TGCAAACCTC TCCACTATAC
281 CGCCGTAATG AACCCCTCAGC TGTGCCAGGC TCTGGCAGGG GTTGCGTGGC TGAGTGGAGT GGGAAACACT
351 CTTATCCAGG GCACTGTAC CCTCTGGCTT CCCCCTGTG GACACCGATT GCTCCAACAT TTCTTCGTGA
421 GGTACCTCC ATGATTAAGC TTGCATGTGT GGACATCCAT GATAATGAGG TTCAGCTCTT TGTTGCTTCA
491 CTGGTCTTGC TCCTCTTGCC CTTAGTGCTA ATACTGCTGC CTATGGACAT ATAGCCAANG TGGCATAAAG
561 GATCAAGTCA GTCCAGG

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SEQ. ID NO:17

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1 GNNNNTTNTT CANTCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTCGCCC TTATTCCGGA GGGTATACAT GAAGGGATTG GTAAGTAGAC GTAAACTCGA AGCCAAGAAC
141 AGAATTTCTC TTAGAAAAGA GAATTGAAAC TAAAGAGAAA GAACTAGCAA AGAAGGAAAT ATTGAATATA
211 CAAGAGAGAG GAGACAGATG ATGGAACAAG ACTCTGAAAG AGGTGGAAGG GATTGAATAC AATCAAAAGT
281 ATGGTGAATG CTAGTTCCAA GATGGTGGCG TAGGGGCAAG CTGGCTTTGC TTACCCCTCC GGCAGAAAAC
351 CAAAAACAAA TAGCACCAG ATTATCACTA GCAATATCCC AGAAGCTACA TATAAGGATG AGACAGTTCC
421 CAGGGCCAG AGAAGATCAG AAGCACAAGT GGGAGAAGTC AGCTTTGGAT GCTACTTTGT TCTAAGGGAG
491 ACAAGTTGGG AGGATGATTG CAGATGTATA TTCAATGTTA TAAAACAGCC CATAAAACAA AGATTGGAAA
561 ATGTTGAATT TTGCAACCAG GAGCAAATAC TGGGAAAGGC GAATTCAGC CACTTGCNGC C

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SEQ. ID NO:18

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1 GNNNNTTNAN TCANTGCCCT NGGGCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG
71 CAGAATTCGC CCTTGTTCG CAAGGTGTAA ATGAAAGGGT TTGCGCAGGA GTAAATGAAG GGATTACGCA
141 GGAGTAAATG AAGGGATTAC GCAGGAGTAA ATGAAGGGAT TACGCAGGAG TAAATGAAGG GATTACGCAG
211 GAGTAAATGA AGGGATTACG CAGGAGTAAA TGAAGGGATT ACGCAGGAGT AAATGAAGGG ATTACGCAGG
281 AGTAAATGAA GGGATTACGC AGGAGTAAAT GAAGGGATTA CGCAGGAGTA AATGAAGGGA TTACGCAGGA
351 GTAAATGAAG GGATTACGCA GGAGCAAATA CATAGGAAGG GCGAATTCCA GCACACTGGC GGCCGTTACT
421 AGTGGATCCG AGCTCGGTAC CAAGCTTGAT GCATAGCTTG AGTATTCTAA CGCGTCACCT AAATAGCTTG
491 GCGTAATCAT GGTTCATAGCT GTTTCCTGTG TGAAATTGTT ATCCGCTCAC AATTCCACAC AACATACGAG
561 CCCGGAAGCA TAAAGTGTAA AGNCTGGGGT GCCTAATGAG TGAATTACTC CATTAA

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SEQ. ID NO:19

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1 GNNANTNATT CCATCCATTG TCCCTTCAGA TGCATGCTCG AGCGGCCGCC AGTGTGATGG ATATCTGCAG
71 AATTCGCCCT TCTTGGTTT TGTGCTGATA GATCATGGGA TTCAGCATGG GGGTGACCAC AGTGTACATC
141 ACTGAGGCTG TTGCACCTGA GTGTGAGTTG CGGGTGGCAG CAGAAGTAAAG GTACACCCCT AGGATTGCAC
211 CATAAAATAA GGAGACAAC TGAAGGTGAG ATGCACAGGT GGAAGATGCC TTGTACTTCC CCTGAGCTGA
281 TGAGATNGCA TGTATGGAAN GAAATTATNT TANAAGTAAG AGTAAAGNAT NCCAGTCAGG GGNANCNTTC
351 ACCCATCAGN TGCAANTTGT AAAAATTATA TTCAANCNAT NTGNATTTAA NGAAAANCCT TATCANGTAN
421 AACTGCNAA GNTNTGNAT NANCCCTNGN ANTTAANNNT TCNACAAGAA AATAANGTGC GTTNNAACTT
491 TTNTAAGTCC CTNTCNCCAT TAANGTCNAN TCCNTCCNTA TCCCTTTTCN NATTTTGNAN TCNNGANTAC
561 NNTCTNNNGC NNTCNATTTC TNTNNTNNCT GACCTACTAA CCNATTNAGT TACNACAAGN CCNTTCNANT
631 CTCTATAATT NCTCGCANGT TNTCCCTCTT NNCANNNTCC CNTTNTNTNC CCTNTTCCCC ATCTNC

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SEQ. ID NO:20

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1 CCATTGGCCC TCTAGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT CGCCCTTCCT
71 ATGTATTTTC TCTTACTGGG CTTTCTGGT TCTCAAATC TTCAGCTCTC TCTCTTTATG CTTTTTCTGG
141 TGATGTACAT CCTCACAGTT AGTGGTAATG TGGCTATCTT GATGTTGGTG AGCACCTCCC ATCAGTTGCA
211 TACCCCATG TACTTCTTTC TGAGCAACCT CTCCTTCCTG GAGATTTGGT ATACCACAGC AGCAGTGCCC
281 AAAGCACTGG CCATCCTACT GGAGAGAAGT CAGACCATAT CATTTACAAG CTGTCTTTTG CAGATGTACT
351 TTGTTTTCTC ATTAGGCTGC ACAGAGTACT TCCTCCTGGC AGCCATGGCT TATGACCGCT GTCTTGCCAT
421 CTGCTATCCT TTACACTACG GAGCCATCAT GAGTAGCCTG CTCTCAGCGC AACTGGCCTT GGGCTTCTGG
491 GTGGNTGGGT TCGGGGGCAA TGCAGTGCCC ACAGGCCTTC AATCAAGTGG GCTGNTCCTT CTGGTGGCCC
561 CCGGTGCCAA TCAACCACTT TTTTTTTGGG ACAATTGCAN CCCTGGAATT GGGC

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SEQ. ID NO:21

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1 GNNCTTANTT CAATCCCACC NANCCNTGCC GANGCATGCT CGNGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTCGCC CTTCTATGT ATTTACTCTT ACTGGGCTTT CCTGGNTCTC AAACCTCTTCA GCTCTCTCTC
141 TTTATGCTTT TTCTGGTGAT GTACATCCTC ACAGTTAGTG GTAATGTGGC TATCTTGATG NTGGTGAGCA
211 CNTCCCATCA GNTGCATACC CCCATGTTNT TCTTTCTGAG CNACCTCTCC TTCCTGGAGA TTTGGTATNC
281 CNCAAGCNGC ANNGCCCAA GCTTTGCNCA TCTTATTGCN CAGANGCINN CCNNTACANN NACNCTCCTG
351 TTTNTCGCTN CCTTNCCTCT TNCTTCNCTC ANNTACTNCN TCTNCTNTAG TNTCTTTCTT CTCTNCTNCT
421 CNTNNCNCCT NTAATNTTCC NCCTNTTCTN NTTTCTNNTT TCCCTNCTCT GTTTCACCCC TACCTCTTAT
491 CCNTNCTNCT NACTTCANNC TCNGNCNNTN NNNCNCNNT AAATNTANGN NNANNNTNNN ATNTNCTCTT
561 CTCCTNTTAT ATCGCTCTT CTCNTNCTTC CNNTTCTCTC TCCTCANNCA TATCNANTNT NTTCTACTCT
631 CGTNCNNTAT CTANNCTCCT NTTTCNGTCC TNCTTCTCCT NTCATTTCTA TATTNCTTCT CANACANTNT
701 TCGCATCGTN GCANCATCTC CTCCCATCTC CTGTNCNCTN TTCCN

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SEQ. ID NO:22

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1 GNNNTTAANT CATTCCCCNC TCNATGCATG CTCGAGCGGC CGCCAGNGTG ATGGATATCT GCAGAATTCG
71 CCCTTGTTTC GGAGGCAGTA GATGAATGGG TTGATGGAAT CTGAGACAGT GCTCTAGAAT CTGTGTTTCA
141 TACAGGATGA GATATAAATG AAACAAATGC TAAATAATGA CACAAGGTAC CTTGCCGAGA GAGGAATCAT
211 CCACCTGGAA GGGTAGGCTG TTTGTGAATA ATGTAGGGTG GGAGAGAAGG CTTTACTAAG GAGATGGGCT
281 TAAAGATGT GAACGATGTG CTCACAGAGG CCACAGAAGA GAAATTATAG CCAGGAGAAC AACCTGAAAG
351 ACAAAGGACA CGGTGGCATG AGCGCATGTA ACACAATGTA CTCAGGAAAT GGCTGGCATC CTGAGATATG
421 GAGTGAATA CAGTACAGGG CTTTGTAAAC TCAGCTTGA GTCAGATCAC AGAAAGCCTT GACAAGGAAC
491 TGAAATGGG TTCTGAAGGC CAGAAGCCCA TTCAAGATTC CCAAAGGGAA AAACACAAAT CAGCTTGGTT
561 TCAGGACGTA ATTCTTGGA GTTGCTAGAA TTACATCAGA AAGGAGGTT ACNT

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SEQ. ID NO:23

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1 GNNNTNANTC ANNCANTGGG CCCTCTAGAT GCATGCTCGA GCGGCCGCCA GTGTGATGGA TATCTGCAGA
71 ATTCGCCCTT CCTATGTATT TCCTCTTACT GGGCTTTCCT GGTTCCTAAA CTCTTCAGCT CTCTCTCTTT
141 ATGCTTTTTT TGGTGATGTA CATCCCCACA GTTAGTGGTA ATGTGGCTAT CTTGATGTTG GTGAGCACCT
211 CCCACAGTT GCATACCCCC ATGTACTTCT TTCTGAGCAA CCTCTCCTTC CTGGAGATTT GGTATACCAC
281 AGCAGCAGTG CCCAAAGCAC TGGCCATCCT ACTGGGGAGA AGTCAGACCA TATCATTTAC AAGCTGTCTT
351 TTGCAGATGT ACTTTGTTAT CTCATTAGGC TGCACAGAGT ACTTCCTCCT GGCAGCCATG GCTTATGACC
421 GCTGTCTTGC CATCTGCTAT CCTTTACACT ACGGAGCCAT CATGAGTAGC CTGCTCTCAG CGCAGCTGGC
491 CCTGGGCTCC TGGGTGNGGG GGTCGTGGC CATTGCAAGT GCCCACAAGC CTAATCAGT GGCCCTGTCC
561 NTCTGGGGGC CCCCGGGCCA TTNACCACTT TNTTCTGGGA CAATTGCACC CTGGAATTG G

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SEQ. ID NO:24

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1 TNNNTAANTC ATTCCNTTGN CCCTCNAGAT GCATGCTCGA GCGGCCGCCA GTGTGATGGA TATCTGCAGA
71 ATTCGCCCTT TCCTTGTTAC TGAGGGAGTA GATTAGGGGA TTGATGGAAT CTGAGACAGT GCTCTAGAAT
141 CTGTGTTTCA TACAGGATGA GATATAAATG AAACAAATGC TAAATAATGA CACAAGGTAC CTTGCCGAGA
211 GAGGAATCAT CCACCTGGAA GGGTAGGCTG TTTGTGAATA ATGTAGGGTG GGAGAGAAGG CTTTACTAAG
281 GAGATGGGCT TAAAGATGT GAACGATGTG CTCACAGAGG CCACAGAAGA GAAATTATAG CCAGGAGAAC
351 AACCTGAAAG ACAAAGGACA CGGTGGCATA AGCGCATGTA ACACAATGTA CTCAGGAAAT GGCTGGCATC
421 CTGAGATATG GAGTGAATA CAGTACAGGG CTTTGTAAAC TCAGCTTGA GTCAGATCAC AGAAAGCCTT
491 GACAAGGAAC TGAAATGGG TTCTGAAGGC CAGAAGCCAT TCAAGATTCC CAAAGGGAAA AACACANATC
561 ACTTGTTTTT AGGACGTATT CTTGGGCAGT TGCTAGAATT ACATCAGAAA GG

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SEQ. ID NO:25

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1 GNNNTTANT CCATGCCCT CTAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
71 GCCCTTGTTT CGCAGCCTAT AAATGAAGGG GTTGATGGAA TCTGAGACAG TGCTCTAGAA TCTGTGTTTC
141 ATACAGGATG AGATATAAAT GAAACAAATG CTAAATAATG ACACAAGGTA CTTGCCGAG AGAGGAATCA
211 TCCACCTGGA AGGGTAGGCT GTTTGTGAAT AATGTAGGGT GGGAGAGAGG GCTTTACTAA GGAGATGGGC
281 TTAAAGAATG TGAACGATGT GCTCACAGAG GCCACAGAAG AGAAATTATA GCCAGGAGAA CAACCTGAAA
351 GACAAAGGAC ACCGGTGGCA TAAGCACATG TAACACAATG TACTCAGGAA ATGGCTGGCA TCCTGAGGTA
421 TGGAGTGGAA TACAGTACCG GGGCTTTGTA AACTCAGCTT GGAGTCAGAT CCAGAAAGCC CTTGACAAGG
491 AACTGAAAT TGGGTTCTTG AAGGCCAGAA GCCATTCAAG GATTCCCAA AGGGGAAAA CACAAATCAA

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561 GCTTGTTTTTTC AGGGACCGTT AATTCTGGGG CCAGGTTGCT TGAATTACCT TCANGAAAGG GAGGTTACACA
631 CT

SEQ. ID NO:26

1 GNNCTTATTC ATCCCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG CAGAATTTCGC
71 CCTTCTTTTG TTCCTCAGAG TGTAGATTAG GGGGTTGATG GGGTTGATGG AATCTGAGAC AGTGCTCTAG
141 AATCTGTGTT TCATACAGGA TGAGATATAA ATGAAACAAA TGCTAAATAA TGACACAAGG TACCTTGCCG
211 AGAGAGGAAT CATCCACCTG GAAGGGTAGG CTGTTTGTGA ATAATGTAGG GTGGGAGAGA AGGCTTTACT
281 AAGGAGATGG GCTTAAAGAA TGTGAACGAT GTGCTCACAG AGGCCACAGA AGAGAAATTA TAGCCAGGAG
351 AACAACTGA AAGACAAAGG ACACGGTGGC ATAAGCGCAT GTAACACAAT GTACTCAGGA AATGGCTGNC
421 ATNCTNAGAT ATGGAGNGNG AATACCAGTA CANGGCTTTN TANACTCANC TTGGAGTNCA GAATCACANA
491 ANGCTTTGCA AGGAACTGAA AATGGGTTCT GAAAGGCCAG AAGCCNTTNA AGATTCCCAA AGGGAAAAAA
561 CACAAATCAA GCTTTTTTNA AGNACNGTAA TTCNTGGNGC CAGTTGCTTA GAATTNCCAT CANAAANG

SEQ. ID NO:27

1 GGNNTAAGCC TTCCCCCTNC GATGCTGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA GAATTGCCCC
71 TTCCCATGTA TTTCTCTTA CTGGGCTTTC CTGGTTCTCA AACTCTTCAG CTCTCTCTCT TTATGCTTTT
141 TCTGGTGATG TACATCCTCA CAGTTAGNGG TAATGGGGCT ATCTTGATGN TGGTGAGCAC CNCCCATCAG
211 TTGCATACCC CCATGTACTT CTTTCTGAGC AACCNNTCCN TCCTGGAGAN TTTGGNATAC CACACGCAAN
281 NAGNGNCCNA AGGCACTTGG NCNTNCTACA GGNNGAGAAG GCTTGACCAT ANNATTTTAC CATGCCTNGC
351 CTTANGNCAN ACCCNNTTN TNCCTNTNT TCCNCTNNNN GGTTNNNTCAN CCGCANNCTT NNATCNNTG
421 NANCTTCATN GAATATGGNN TNNGTNTNTC TTGAGAGCCT CNNGATCNNA TTTTTTCCAN CNCTAAAGN
491 GNGCTTNTC TCTCTNNNAT CTAGCTTNTT GGNTCTCTTT TNTNTNCTNA CCCGTGNTNT CCTATNTGNT
561 GTCTCTTCTT ACNNNCTGCN NTTATTNTAN ATCANNTCTN NCNTTGCTCT CNTNTACNAC ATNATCATNC
631 TCNCTCCCN CTNTCNCCT CTATNNCNTA CCATCNCCT CTTCTCATTC ANCTCTTNT CATTGNTTGT
701 TCANTTANNC ACTCTCCNTC NCATCTTCTA TNCACTANNT TTNTTNTTTT NCTCTCTANT TCTNNTTCCA
771 NTGTNCACTC CNNTCTTNNC NNTTNCCCTA NCG

SEQ. ID NO:28

1 GTNNTTNANN NCATTGCCCC TCTNGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT
71 CGCCCTTCC CTCTACTTCC TCTTACCGGG CTTTCTGGT TCTCAAACCT TTCAGCTCTC TCTCTTTATG
141 CTTTTTCTGG TGATGTACAT CCTCACGGTT AGTGGAATG TGGCTATCTT GATGTTGGTG AGCACCTCCC
211 ATCAGTTGCA TACCCCATG TACTTCTTTC TGAGCAACCT CTCCTTCCTG GAGATTTGGT ATACCACAGC
281 AGCAGTGCCC AAAGCACTGG CCATCCTACT GGGGAGAAGT CAGACCATAT CATTTACAAG CTGTCTTTTG
351 CAGATGTACT TTGTTTTCTC ATTAGGCTGC ACAGAGTACT TCCTCCTGGC AGCCATGGCT TATGACCGCT
421 GTCTTGCCAT CTGCTATCCT TTACACTACG GAGCCATCAT GAGTAGCCTG CTCTCAGCGC AGCTGGCCCT
491 GGGCTTCTGG GTGGGTGGGT TTCGGGGCCA TTGCAAGTGC CCACAGCCCT TATCAAGTGG CCTGTCTTTC
561 TGNGGCCCCC GGGCCCATCA ACCACTTTTT TCTGGGGACA ATTGCACCCT GGAATGGCCC

SEQ. ID NO:29

1 GTNNTTNNT CCATNCCATT GGGCCCTCTA GATGCATGCT CGAGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTGCCC CTTTCATGGT TCCGGAAACA GTAAATTATG GGGTTCAGTC ATGGTAACAG GAGGAGGCTG
141 AGTGATGGG CATGGATGGG GGCTGTGAAT GTGGCGGGAG CTCATGGATG TGCTCTTCTG AGTGCTTCAC
211 GTTCTGAGT GAAATAAGAA GCAAGGTCAT CACCGAGAGG GAGGAGACAG GCTCGGGTGA GTTAGTGGA
281 TATGAATCCA AGAGAGACCA TTCAACTTAG TTGTCTATTT TTTTTTCTC CAGTTATAGT CACTTGCATG
351 AATGTAGATG TGGAGTACTT GATCATAAGA TCCATTTTAT GGCAGAAGAC ATTATTTTTT TGAGCCTTCT
421 GCTGTCAATT TCTAAATAAG CAGGCCAGCC GGGCTGTGCA CCTAAATGTC TGTCTGGGAG GAGCAGGCTG
491 AGAAGTCTTG CAGTCTGCAG GACACCCGAG GAATCGTATT GTGGGAACCG TCCCCGAGAA CCACACGAGC
561 CGTGCTNCTC AGTNTGACT GGAANAATGA AATTGNAAGC CAAGTNGTTC NNGGANCNNT

SEQ. ID NO:30

1 GNNNTTNANN CCATTGCGCC CTCTAGATGC ATGCTCGAGC GGCCGCCAGT GTGATGGATA TCTGCAGAAT
71 TCGCCCTTCC TATGTATTTT TCTTCTTAAC GATTGGAATG CCTGGGATTA GGCAGATGAT TTTCTTTTTC
141 CCCCATACCC CTCTATTATT TAGGTGATTG AGTTTAAATC CCTTTATCTA CACCCTTCGG AACAAAGGCG
211 AATTCCAGCA CACTGGCGGC CGTTACTAGT GGATCCGAGC TCGGTACCAA GCTTGATGCA TAGCTTGAGT

281 ATTCTAACGC GTCACCTAAA TAGCTTGGCG TAATCATGGT CATAGCTGTT TCCTGTGTGA AATTGTTATC
351 CGCTCACAAT TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG
421 CTAATCACA TTAATTGCGT TGGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG CCAGCTGCAT
491 TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTCGCGTA TTGGGCGCTC TTCCGCTTTC TCGCTCACTG
561 ACTCGCTGGG CTTCGGTCGN TCGGCTGCGG CGAGCGGGAT CAGCTCACTC AAAAGG

SEQ. ID NO:31

1 GNNNNNNNNNT CANGCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTCGCCC TTCCTATGTA TTTCTCTTCA CTTTCTCCGA CATCACTCAC AGCCACCCCA CCCTCAGCCT
141 CTCCCTCCTC CCATGTATTT TCTCTTCAAT CTCTCCTTCT TTGATATCCT GAACTTTCTG TAGCTCTTTA
211 TTTTCTCTTC CAATCCCTTC ATATACACGT TTCGTAACAA GGGCGAATTC CAGCACACTG GCGGCCGTTA
281 CTAGTGGATC CGAGCTCGGT ACCAAGCTTG ATGCATAGCT TGAGTATTCT AACGCGTCAC CTAAATAGCT
351 TGGCGTAATC ATGGTCATAG CTGTTTCTCTG TGTGAAATTG TTATCCGCTC ACAATTCCAC ACAACATACG
421 AGCCGGAAGC ATAAAGTGTA AAGCCTGGGG TGCCTAATGA GTGAGCTAAC TCACATTAAT TGCCTGCGCT
491 CACTGGCCGC TTTCCANGTC GGGAAACCTG TCGGCCAGCT GCATTAAATG AATCGGCCAA CGNCNCCGGA
561 GAGGCGGTTT GCGTATTGGG CGCTNNTTTCG TTCTTCGNTN ACTGATCGNT GG

SEQ. ID NO:32

1 GNNNNNNNNNT TCATNCCATT GGGCCCTCTA GATGCATGCT CGAGCGGCCG CCAGTGTGAT GGATATCTGC
71 AGAATTCGCC CTTGTTGCTT AGAGTGTAAG TAAAAGGGTT AACATTGGCT TAGAGGTGAA GAGTAAATAC
141 ATAGGAAGGG CGAATTCCAG CACACTGGCG GCCGTTACTA GTGGATCCGA GCTCGGTACC AAGCTTGATG
211 CATAGCTTGA GTATTCTAAC GCGTCACCTA AATAGCTTGG CGTAATCATG GTCATAGCTG TTTCTGTGT
281 GAAATTGTTA TCCGCTCACA ATTCCACACA ACATACGAGC CGGAAGCATA AAGTGTAAG CCTGGGGTGC
351 CTAATGAGTG AGCTAACTCA CATTAAATTGC GTTGCCTCA CTGCCCCTT TCCAGTCGGG AAACCTGTCG
421 TGCCAGCTGC ATTAATGAAT CGGCCAACGC GCGGGGAGAG GCGGTTTGGC TATTGGGCGC TCTTCCGCTT
491 CCTCGCTCAC TGAATCGCTG CGCTCGGTG NTCGGCTGCG GCGAGCGGTA TCAAGCTCAC TCAAAGGCGG
561 TAATACGGTT ATCCACAGAA TCAGGGGGAT ACGCANGAAA GAACATGTGA GCAAT

SEQ. ID NO:33

1 GNTNTNANTC ATGCCCCNC CGATGCNTGC NCGAGCGGCC GCCAGTGTGA TGGATATCTG CAGAATTCCG
71 CTTGTTGCG GAGCGAATAT ATGAAGGGGT TAAGGGAAGA GAAAATACAT AGGAAGGGCG AATTCCAGCA
141 CACTGGCGGC CGTTACTAGT GGATCCGAGC TCGGTACCAA GCTTGATGCA TAGCTTGAGT ATTCTAACGC
211 GTCACCTAAA TAGCTTGGCG TAATCATGGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT
281 TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG CTAATCACA
351 TTAATTGCGT TGGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG CCAGCTGCAT TAATGAATCG
421 GCCAACGCGC CGGGGAGAGG CGGTTTGGCT ATTGGGCGCT CTTCGCTTTC CTCGCTCACT GACTCGCTTG
491 CGCTCGGTCC GTTCGGCTGC GCGAGCGGT ATCAANTCAC TCAAAGGCG GGAATACGGG TTTNCACAGA
561 AATCAGGGGG ATAACGCNGG AAAGAACATG TGAGCCANAN GGCAGCAAAA GGCNAGGAA T

SEQ. ID NO:34

1 GNNNNNNNNNT CANNCCATTG GGCCCTCTAG ATGCATGCTC GAGCGGCCGC CAGTGTGATG GATATCTGCA
71 GAATTCGCCC TTGTTCCGAA GGCTATAGAT GAAGGGGTTT TAGGTTTTTA GGAACACAGG CTAAGGGGGA
141 AGAGAAAATA CATGGGAAGG GCGAATTCCA GCACACTGGC GGCGTTACT AGTGGATCCG AGCTCGGTAC
211 CAAGCTTGAT GCATAGCTTG AGTATTCTAA CGCGTCACCT AAATAGCTTG GCGTAATCAT GGTCATAGCT
281 GTTTCCTGTG TGAATTTGTT ATCCGCTCAC AATTCCACAC AACATACGAG CCGGAAGCAT AAAGTGTAAG
351 GCCTGGGGTG CCTAATGAGT GAGCTAACTC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG
421 GAAACCTGTC GTGCCAGCTG CATTAAATGAA TCGGCCAACG CGCGGGGAGA GGCGGTTTGC GTATTGGGCG
491 CTCTTCCGCT TCCTCGCTCA CTGACTCGCT GCGCTCGGTC GTCGGCTGCG GCGAGCGGTA TCAGCTCACT
561 CAAAGGCGGT AATACGGGTA TCCACAGAAT CANGGGATAA CGCAGGAAAA GACA

SEQ. ID NO:35

1 GNNNTNANT CATTGCCCCG CTNGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
71 GCCCTTCCGA TGTATTTTCT TCTACGTTAA GGTATTTTAA ATTGTTACTA ATGCATAAGG GCAACACATT
141 CTGTAATGCT GACAAGATGA AAGAGCCAAA AGTAATTAAT GATGCTGTTA CCTCACAAAT ATGTATGTGT
211 GGATGTATAT ATATCTATT C AATATATGTA ACTATACATA TGTCTGTTT TAATTGAAAA CACCAGGTAA

281 TTATCATCTG TAGAAACCCT AGTGTCTCAG ATAAGTTGGC TAGTTTTTTG TTTCACATAA AGGAACAAAC
 351 ATTTATAGAT TTATATGTAT ATTAATAATG GTAAAAATTG GCTGGGTGCA GTGGTTCATG CCTATAATAC
 421 CAGCACTTTG GGAAGCCGAG GTGGGCGGAT TACTTGAGGT AAGGAGCCCA GCCTGACCAA CAAGGTGAAA
 491 CCCCATCCCT ACTAAAAATA CAAGAATTAG CCCGGGGATG GTGGTGGCCA CCTGTAATCC CAGCTACTTG
 561 GGAGACTGAA GCCAGGAAAA TCACTTGACC CAGGAAGCNG AGGTTGCAGG NGAG

SEQ. ID NO:36

1 NGNNNTTGAN TCAATTCNNN GNCGANGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCTA TGTATTTCTT TCTAGCCAAC CTCCCACTCA TTGATCTGTC TCTGTCTTCA GTCATAGCCC
 141 CCAAGATGAT TACTGACTTT TTCAGCCAGC GCAAAGTCAT CTCCTTCAAG GGCTGCCTTG TTCAGATATT
 211 TCTCCTTCAC TTCTTTGGTG GGAGTGAGAT GGTGATCCTC ATAGCCATGG GCTTTGACAG ATATATAGCA
 281 ATATGCAAAC CCTTACACTA CACTACAATT ATGTGTGGCA ACGCATGTGT CGGCATTATG GCTGTGCGAT
 351 GGGGAATTGG CTTTCTCCAT TCGGTGAGCC AGTTGGCCTT TGCCGTGCAC TTACCTTCTT GTGGTCCCAA
 421 TGAGGTCGAT AGTTTTTATT GTGACCTTCC TAGGGTAACC AAACCTGCCT GTACAGATAC CTACAGGCTA
 491 GATATTATGG TCATTGCTAA CAGTGGTGTG CTCACTGTGT GGTCTTTTGT CTTCTAATCA TCTCATACAC
 561 TATCATCCTA ATGACCATCC AGCATTGCCC TTTAGATAAG TCGTNCAAAG G

SEQ. ID NO:37

1 GNNNTNANTC CNNNCCNCNN CTAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC TGCAGAATTC
 71 GCCCTTCCCA TGTATTTGCT TCTCAGCAAC TTGTCTTCT CTGACCTCTG CTTCTCTTCC GTGACCATTC
 141 CCAAGTTGTT ACAGAACATG CAGAACCAGG ACCCATCCAT CCCCTATGCG GACTGCCTGA CCCAAATGTA
 211 CTTCTTCCTG TTATTTGGAG ACCTGGAGAA CTTCTCCTT GTGGCCATGG CCTATGACCG CTATGTGGCC
 281 ATCTGCTTCC CCTGCACTA CACCGCCATC ATGAGCCCA TGCTCTGTCT CGCCCTGGTG GCGCTGTCCT
 351 GGGTGCTGAC CACCTTCCAT GCCATGTTAC ACACTTTACT CATGGCCAGG TTGTGTTTTT GTGCAGACAA
 421 TGTGATCCCC CACTTTTTCT GNGATATGTC TGCTCTGCTG AAGCAGGCCT TCTCTGACAC TCGAGTTAAT
 491 GAATGGGTGA TATTTATCAT GGGAGGGCTC ATTCTTGTC TCCCATTCTT ACTCATTCTT GGGTCCATG
 561 CAAGAATTGT CTCTCATCC TCAAGGTCCC TTTNTAANG GTATCTGCAA GGCCCT

SEQ. ID NO:38

1 NGNNNNNTTNA NTCNANGCCN NGNGCCCTCT AGATGCATGC TCGAGCGGCC GCCAGTGTGA TGGATATCTG
 71 CAGAATTCGC CCTTCCAATG TATTTACTTC TCAGCCAGCT CTCCCTTATG GACCTGATGT ACATCTCCAC
 141 CACCGTCCCC AAGATGGCGT ACAACTTCCT GTCCGGCCAG AAAGGCATCT CCTTCTGGG ATGTGGTGTG
 211 CAAAGCTTCT TCTTCTGAC CATGGCGTGT TCTGAAGGCT TACTCCTGAC CTCCATGGCC TACGACCGTT
 281 ATTTGGCCAT CTGCCACTCT CTCTATTATC CTATCCGCAT GAGTAAAATG ATGTGTGTGA AGATGATTGG
 351 AGGCTCTTGG ACACTGGGGT CCATCAATC CTTGGCACAC ACAGTCTTTG CCCTTCATAT TCCCTACTGC
 421 AGGTCTAGGG CTATTGACCA TTTCTTCTGC GATGTCCAG CCATGTTGCT TCTTGCTGTA CAGATACTTG
 491 GGTCTATGAA TATATGGTTT TTGTAAGGAC AAAGCCTCTT TCTTCTTTN CCTTTCATTG GCATCACTTC
 561 TTCTGNGGGC CGAGTCTTAA TTGCTGGCTA TATAATGCAC TCAAAGGAGG GGAGG

SEQ. ID NO:39

1 TAGNNNNNTT ANNTCANNGC CNNTGNNGC TCAGATGCAT GCTCGAGCGG CCGCCAGTGT GATGGATATC
 71 TGCAGAATTC GCCCTTCCAA TGTATTTTCT TCTCAGCAGG AGAGATATTT ATCCTCACTG CCATGTCCTA
 141 TGACCGCTAT GTAGCCATCT GCTGTCCCTT GAACACGAG GCTGCACAGA GTACTTCTC CTGGCAGCCA
 211 TGGCTTATGA CCGCTGTCTT GCCATCTGCT ATCCTTTACA CTACGGAGCC ATCATGAGTA GCCTGCTCTC
 281 AGCGCAGCTG GCCCTGGGCT CCTGGGTCTG TGGTTTCGTG GCCATTGCAG TGGCCACAGC CCTCATCAGT
 351 GGCCTGTCTT TCTGTGGCCC CCGTGCCATC AACCATTCTT TCTGTGACAT TGCACCCTGG ATTGCCCTGG
 421 CCTGCACCAA CACACAGGCA GTAGAGCTTG TGGCCTTTGT GATTGCTGNT GTGGTTATCC TGAGTTTCATG
 491 CCTCATCACC CTTGTCTCCT ATGTGTACAT CATCAGCACC ATCCTTAGGA TCCCCTCTGC AGTGGCCGGA
 561 GCAAAGCCTT CTCCCGTGCT CCTCGCATCT NAACNGGTG CTCAATTGGT ATGGG

SEQ. ID NO:40

1 CATGCTCGAG CGGNCGCCAG NGNGATGGAT ATCTGCAGAA TTCGCCCTTC CTATGTATTT GCTTCTCAGC
 71 AGGAGAGATA TTTATCCTCA CTGCCATGTC CTATGACCGC TATGTAGCCA TCTGCTGTCC CCTGAACCTAC

141 GAGGTGATTC ATGTGCCCCAT TAGAGCTTGA GAAGCACTGC TTGGAAGCCC CTTCTGCCAT CAATGAGGCT
 211 GCACAGAGTA CTTCTCTCTG GCAGCCATGG CTTATGACCG CTGCCTTGCC ATCTGCTATC CTTTACACTA
 281 CGGAGCCATC ATGAGTAGCC TGCTCTCAGC GCAGCTGGCC CTGGGCTCCT GGGTCTGTGG TTTCGTGGCC
 351 ATTGCAGTGC CCACAGCCCT CATCAGTGGC CTGTCTTCT GTGGCCCCCG TGCCATCAAC CACTTCTTCT
 421 GTGACATTGC ACCCTGGATT GCCCTGGCCT GCACCAACAC ACAGGCAGTA GAAGCTTGNG GCCTTTGTGA
 491 ATTGCTGNTG TGGGTATCCC GAGTTCATGC CTCATCACCC TTGNCTTCTA TGTGTACATC ATCAGGCACC
 561 ATTCTCAGGA TCCCTTCTGC AAGNGG

SEQ. ID NO:41

1 ATGNNNNNNN NNTTTNNNAA ANTTTTNCCC ANTTTGGGCG GNCCCCCCT TCTTTAAGGN AATGGGCCCA
 71 TTGGGCCCCTT CCCGGAAGGC CCGGGGGCNC CCGGCCCCAA AGGTTTGGGT TGGGAAATGG GGGGAATTTA
 141 AATTCCCTTTG GGCCAAGGNA AAAATTTTCC NGCCCCCCTT TTTTCCCCT TTTGGTTTT ANCCGGGGGA
 211 ANGGGGGGGT TGATTAATTA ATCGGGAAGN TNNGGGGGAA NTTTTTTAAA AAAAACCTTG GGGGAAGGTT
 281 CCAACCCAAC AAGGTTGGTT TTCCANGGGA CCGTTGGGAC CAGGCTTTTN GAATCAAGAA TCCCAAAGGG
 351 CATTCTTTTG GATTAAGGAA NGGTGCCGGG ACCGGTGAAA GGGAAAAAAC TGGTGGACCC CATACCAAAA
 421 TGAGAACCAC GGTGAGATGC CGAGGAGCAC GTGGAGAAAG GCTTTGCTTC CGGCCACTGG CAGAGGGGAT
 491 CCTGAGGATG GTGCTTGATG ATGTACACAT AGGGAGACAA GGGTGATGAG GCATGAACTC AGGATAACCA
 561 CAACAGCNAT CACAAAGGCC ACAAAGCTCT ACTGCCTGTG TGTGGGTGC AGGCCAGGGC AATCCAGGGG
 631 TGCAATGTCA CAAGAAAGAA AGTGGTTGAT GGCACGGNG GGCCACAGAA GGACAGGCCA CTTGATGAAG
 701 GGCTTGTGGG CACTGCAATG GCCACGAAAC CACCAGACCC AGGAACCCAN GGCCAAGCTT GCGCCTGAAG
 771 AGCAAGGCTA CTCATGAATG GCTTCCGTAG TNGTAAAGGA TAGCAAGATG GCAAAGGCAA GCCGGTCATN
 841 AAGCCATGGC TTGCCNG

SEQ. ID NO:42

1 GNNNTTANNN CATTGCGCCC TCTAGATGCA TGCTCGAGCG GCNCGCCAGT GTGATGGATA TCTGCAGAAT
 71 TCGCCCTTGT TGCGCAAGGA GTAGATGAAC GGATTCAGGG CAAGGGAGTG CTGAGGAGAT AGACGGGTAT
 141 AACTGGGCA CAAGTCCATG AGTAATCAAG GCCTGTTATT TAAAAAAGG CTTGAACAAT
 211 ATAGAATCCC ATTACCCAGA GATAGACTGG ATGGTGAATT AAACCTTCTG ATGAATTTCT TTCCAGATAT
 281 CTCTCTATGC ATATGTATAC ACAAGCAATT TTTGGAAGAA AAGATACTTT ATAAGGATAA GCCTGAAAAC
 351 TGCAACGAAT GCAATGTGGA GAATGAAGGC AAGATGTGGC GAAGAAGGGC ACCACAATCT GGTGGCTGAG
 421 AGAGTGCAAC TGTCACATA GCTAAAAGGA GAGCTGGAGA AGCTGGTGAG GACAGTAAGA GATGAATCTG
 491 GTTTAAGACA CGCTGAGTCT CAAATGCCAT GGCTCCCCTA GGTTCCTCT TCAGATGTAA ATCTTAAGCT
 561 CAAAGCAGGT GGATGAGAAA TCACATTTCA TAGTCCCTGC ACAGACGGCT NTNTTGAGCT

SEQ. ID NO:43

1 GNNNTTANNN TCATTGCCCC GNNNGANGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT
 71 CGCCCTTCCC ATGTATTGTC TTCTCAGCAA CTTGTCTTTC TCTGACCTCT GCTTCTCTTC CGTGACCATT
 141 CCAAGTTGT TACAGAACAT GCAGAACCAG GACCCATCCA TCCCCTATGC GGACTGCCTG ACCCAAATGT
 211 ACTTCTTCCCT GTTATTTGGA GACCTGGAGA GCTTCTCTCT TGTGGCCATG GCCTATGACC GCTATGTGGC
 281 CATCTGCTTC CCCCTGCCT ACACCGCCAT CATGAGCCCC ATGCTCTGTC TCGCCCTGGT GCGCTGTCC
 351 TGGGTGCTGA CCACCTTCCA TGCCATGTTA CACACTTTAC TCATGGCCAG GTTGTGTTTT TGTGCAGACA
 421 ATGTGATCCC CCACTTTTTC TGTGATATGT CTGCTCTGCT GAAGCTGGCC TTCTCTGACA CTCGAGTTAA
 491 TGAATGGGTG ATATTTATCA TGGGAGGGCT CATTCTTGCA TCCATTCTTA CTCATCCTTG GGTCTATGC
 561 AAGAAATGCT CCTCATCCTC AAGGCCCTTC TNTAAGGGTA TCTGCAAG

SEQ. ID NO:44

1 GNNNTTNANT CNTGCCCTGN CCCNCGCNC NNGCGCCGCG GCGGATGGAT ATCTGCAGAA TTCGCCCTTG
 71 TTAAGTAAAG TATAGATGAA CGGATTCAGG GCAAGGGAGT GCTGAGGAGA TAGACGGGTA TACACTGGGC
 141 ACAAGTCCAT GAGTAATCAA GGCCTGTTAT TTAAGGAGAA AAAAAGGCT TGAACAATAT AGAATCCCAT
 211 TACCCAGAGA TAGACTGGAT GGTGAATTAA ACTTTCTGGT GAATTTCTTT CCAGATATCT CTCTATGCAT
 281 GTGTATACAC AAGCAATTTT TGGAAGAAAA GATACTTTAT AAGGATAAGC CTGAAAACCT CAACGAATGC
 351 AATGTGGAGA ATGAAGGCAA GATGTGGCGA AGAAGGGCAC CACAATCTGG TGGCTGAGAG AGTGCAACTG
 421 TCACTACAGC TAAAGGAGA GCTGGAGAAG CTGGTGAGGA CAGTAAGAGA TGAATCTGGN TTAAGACACG
 491 CTGAGTCTCA GATGCCATGG CTTCCCTAGG TTGCCTCTTN CAGATGTAAA TCTTAAGCTC AAAGCANGTG
 561 GATGAGAAAT ACACATTTNA TAGTCACCTG CACAGACGGT TTTTGTAT

SEQ. ID NO:45

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1 CATGCCCCGT CCCNCNAGNT NCNNGCNCCG CGGCCGCNAN GGATATCTGN ANAATTTCGCC CTCCTATGT
71 ATTTACTTCT CCAACTTCTC CTTCCTCATCT CTATCATTAG AACCCATTCA TATACACCCT ACGAAACAAG
141 GGCGAATTCC AGCACACTGG CGGCCGTTAC TAGTGGATCC GAGCTCGGTA CCAAGCTTGA TGCATAGCTT
211 GAGTATTCTA ACGCGTCACC TAAATAGCTT GGCGTAATCA TGGTCATAGC TGTTTCCTGT GTGAAATTGT
281 TATCCGCTCA CAATTCCACA CAACATACGA GCCGGAAGCA TAAAGTGTA AGCCTGGGGT GCCTAATGAG
351 TGAGCTAACT CACATTAATT GCGTTGCGCT CACTGCCCCG TTTCCAGTCG GGAAACCTGT CGTGCCAGCT
421 GCATTAATGA ATCGGCCAAC GCGCGGGGAG AGGCGGTTTG CGTATTGGGC GCTCTTCCGC TTCTCGCTCA
491 CTGACTCGCT GCGCTCGGTC GTTCGGCTGN GGCGAGCGGT ATCAGCTCAC TCAAAGGCGG NAATACGGTT
561 ATCCACAAGA ATCAGGGGGA TAACGCAAGA AAAGACATGT GA

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SEQ. ID NO:46

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1 GNNNTNATTN ATTGCATTGG GCCCTCTAGA TGCATGCTCG AGCGGCCGCC AGTGTGATGG ATATCTGCAG
71 AATTCGCCCT TAGTGAGTAG ATGAAAGGGT TCAGCATGGG GGTCAACCACA GTGTACATCA TAGCCATGAC
141 AGTGTCTTTT AGAGTAGAAC TATTAGCTGA TGAGCATAAG TAGAGACCAA TAACGGTTCC ATAGAACAGT
211 GACACCACAG ATAGGTGGGA GCCACAAGTA GAGAAGGCCT TGCAGACACC CTAGAAGAA GGGACCTTGA
281 GGATGGAGGA GACAATTCTT GCATAGGACC CAAGGATGAG TAGGAATGGG ATGACAAGAA TGAGCCCTCC
351 CATGATAAAC ATCACCATT CATTAACTCG AGTGTGAGAG AAGGCCAGCT TCAGCAGAGC AGACATATCA
421 CAGAAAAGGT GGGGGATCAC ATTGTCTGCA CAAAAACACA ACCTGGCCAT GAGTAAAGTG TGTAACATGG
491 CATGGAAGGT GGTGAGCACC CAGGACAGCG CCACCAGGGC GAGACAGAGC ATGGGGCTCA TGAGGGCGGT
561 GTAGTGCAGG GGAAGCAGA TGGCCACATA GCGGTCATAG GCCATGGCCA CAAGGAGGAA

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SEQ. ID NO:47

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1 CNATGGGCCC TCTAGATGCA TGCTCGAGCG GCCGCCAGTG TGATGGATAT CTGCAGAATT CGCCCTTCCA
71 ATGTATTTGC TTCTCAGCAA CTTGTCCTTC TCTGACCTCT GCTTCTCTTC CGTGACCATT CCCAAGTTGT
141 TACAGAACAT GCAGAACCAG GACCCATCCA TCCCCTATGC GGAAGTGCCTG ACCCAAATGT ACTTCTTCTT
211 GTTATTTGGA GACCTGGAGA GCTTCCTCCT TGTGGCCATG GCCTATGACC GCTATGTGGC CATCTGCTTC
281 CCCCTGCACT ACACCGCCAT CATGAGCCCC ATGCTCTGTC TCGCCCTGGT GGCCTGTCC TGGGTGCTGA
351 CCACCTTCCA TGCCATGTTA CACACTTTAC TCATGGCCAG GTTGTGTTTT TGTGCAGACA ATGTGATCCC
421 CCACTTTTTT TGTGATTTGT CTGCTGTGCT GAAGCTGGCC TTCCCTGACA CTCGAGTTAA TGAATGGGTG
491 ATATTTATCA TGGGAGGGCT CATTCTTGTC ATCCCATTCC TACTCAATCC TTGGGTCTAT GCAAGAAATT
561 GTCTTCTTCA TNCTCAANGG CCCTTCTTTC TAANGGTATC TTGCAAG

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SEQ. ID NO:48

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1 ANNNCCNTNG GAGCTCCAAA GCAGTGGTAA CAACGCAGAG TACGCCCCCT ATGTACTTAC TTTTGTTAAG
71 TCCAACCTCC ATCCTCCTTG GCCTTTTGAT TCAATTGATC ACTCCTTCCT CCTCAAAACA CCTTGTTTAC
141 TCATCCTTTC TCAGTCTCCT TTGTGGATTC TTCCTCATTT ATTTGACCTC TTGCTGGTGA ACCCTTTCAT
211 ATACACTCTC CGTAACAAAG AGGGCGTACT TCTGTCTGCT TGAGCGNACT GATGGNACCC AGCTTTTGTT
281 CCCTTTAGTG AGGGNTAATT GCGCGCTTGG CGNAATCATG GNCATAGCTG NTTNCTGNGN GAAANTGNTA
351 TTTCGNTNAC AATTNCACAC AACATACNAG CCGGGAGCAT AAAGGGNNAA GNCCTGGGGN GCCTAATGAG
421 GGAGCTTACT CACAATAATT GGGGTGNGCC CACTGGCCCC TTTTCAGGCG GGAAAACCTN GCGGGGCCAG
491 CTGGAATAAA TGAATCGGGC CACGCGCCGG GGAGGAGGGC GGGTTNNGGA ATTGGGCGCT TTTCCNTTT
561 CTNGGTTAAT GGACTNNGTN GGCNNNGTCC GTTCGGTTGG GGGGANCGGN NNT

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SEQ. ID NO:49

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1 AACGCAGAGT ACCGCCCACT ACCTAATCTG TACATGAAAG GGTTTAAAAG AGACTGGGAA GAGAGGAATT
71 GGCAAGATCA AGCAGAGGCA ACTCCTTCTA GTCCTTCTAG TACCGCAAGG GGCAGATAAA TGGAAATGGGT
141 AACACCTAGA GGAAAGTATA CTTGCCAAAA GCAAATNCAT AGGGGGGAGT ACATTATCGG GTTGAAAAAA
211 GTATTCCATG CAGATAAAAA CCAAAGCAA ATACATCGGG GCGTACTTTC TGTCGTCTTT GAGCGTACTG
281 ATGGTACCCA GCTTTTGNCT CTTTAGTGAG GGTAAATTGC GCGCTTGGCG TAATCATGGT CATAGCTGGT
351 TTCTGTGTGA AATTGTTATC CCGCTCACAA TTCACACAAC ATACGAGCCC GGGAGCATAA AGTGTAAAGC
421 CTGGGGTGCC TAATGAGTGG AGCTTACTTA CATTAAATTG CGTTGCGCTC ACTGGCCGCT TTTCCAAGTC
491 GGGAAACCTG TCGTGNACG TTCANTAATG AATCGGCCAA CGCCGCGGGG AGAGGCGGGT TGCCTATTGG
561 GCGCTCTTCC GCTTCTTNGT TNACTGACTT CGG

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SEQ. ID NO:50

1 GNNNTTTAAAC NCCGGNGCTN CNAGCAGTGG AACAACGCAG AGTACGCCCC CGATGTACTT TCTTTTTTCAG
71 TCTCAAGTCT TCCTCTTCTC CAAAGATTTT GTCTTTTCTA CTACCTGAGC TACCAAATCC CTTGTCATCA
141 ATTTCAATAA CTGTATTCTC TTCATCATTT CAACTTCAAA CGTGTCATCT CAGAACAAGC TTCATGTTAC
211 TTCCAATTTT ATCCTTCTTG TTTGCTGATT CCAAGAATTC CAGTCCCATC TAGGCCCCGA ATGCATTGTT
281 CCTGCCACCC TTTTCATATC CTCAATTCCC TTGTATCATC ACTTTCCTTT TATATAGCAC AGATTCCATG
351 ATTCATAACA ATAATTATGT TTTTTTTTGC ATGTGCTCTT AATTTCCTTT CTTGCTCCTA TTATCTTCTA
421 TCATACTTTT CTGGAAACAC TAATTCTGGT GAAATATACT CTTTGTGGAC TTTGCACTTA TGCTCAGTCA
491 GCTGAAGATG ATGGCTAGAC AAATACTCAC AATCATGCTG ACTGGCCCCA TTTATAGTCA TGACCACCGA
561 TTACAAACCC CTTCATTTAT TCTCCGCAAC AGGGGCGTCT TCTGCGCTTG AGCGTCCGGT GGGG

SEQ. ID NO:51

1 GCAGTGGTAA CAACGCAGAG TACGCCCCGT ACGGAGGCTG TAAATAAAGG GGTGAGGAA GTAAAGTACT
71 TCACAGTACT GGAGCACACA GCATGTGAAT TTCAGCCAAA GGACAAATGC CTCCAAAAAA AGTTAATTCA
141 CAGTGCAGCA GGGCGAGGCA CTTGTCTTAT TCGCTGGTTC TCACATTGAC CCTGAAAGGA CTTTTTTTTG
211 TTAATCCCAT TTTTCACAGAT GGGAAAGGGA CTCTGTATGG TTGTCACTTT TATCCAAAGT CTCATAGCCA
281 GTAAGAAGCT GCCCTCAAAG TCCCTACCCT GTCTTCCATT CGACTATTCT GAGGTTTCTA CCCAGAAACC
351 CCATACCTCT GCCTTATATT TTAATGAAAA GTATGTCTCC AGGTTTATGT GGAGAATAAC CAAGACCTCA
421 GAAACATTTA GTGAAAATCA GAGCTAGAAG GAATCTGTTT TTTTGCAGT TCAGAGAAAC TGACTTGGAT
491 AAGACATCAA AGTTGTCTTG TGCAGCAAT TCTCCTCCGG CACATAGTAG GCACTCTGAT AAATTCAAAA
561 AGGCTTCTAA GAAGAGGCAG AAGN

SEQ. ID NO:52

1 GTGAANCCAN NNTAANNCCN ATTGGAGCTC CAAGCAGTGG TAACAACGCA GAGTACGCCC CCGATGTAGT
71 TTCTTCTTTC CTTCTTCTCC TCCTTCCTTC CTCTTTCTCT TTCTCTCTCT CTCCCTCTCC CTCTCCCTCT
141 CCCTCTCTCT CTCCTTTTTT TCCTCCTTCC TCCTCCTCCC CCAATCCGT TCATGACTTC TTCTTCTTCC
211 TCTTCTTCTT CTTTCTTCTT TTCTTCTTTT TCTCTAAGCA GGATCCTGGG CTGTTCAAAC CAGAGAGCTG
281 TAAGTCTTTT CTTTCCCCAT TACTGTTAGA TCCGTTGAAT CGGCTCCAGA AACCAAACAA GTTAACCCTT
351 GCATTTACAC GTTTCGTAAC GGGCGTACTT CTGTGCTCTT GAGCGTACTG ATGGTACCCA GCTTTTGTTT
421 CCTTTAGTGA GGGTTAATTG CGCGCTTGGC GTAATCATGG TCATAGCTGT TTCTGTGGG AAATGTGTAT
491 CCGCTCACAA TTCCACACAA CATACGAGCC GGGAGCATAA AAGTGTAAG CCTGGGGTGC CTNATGAGTG
561 AGCTAACTCA CATTAAATTG GTTGCCTTA CTGNCCGTTT TCAGTCNGGA AAN

SEQ. ID NO:53

1 TNANNCCNNT TAANNCCCAT TGGAGCTCCA AAGCAGTGGT AACAACGCAG AGTACGCCCC CGATGTACTT
71 GCTTCTTCTT CTTTGGAGTG GCTGAATGCT TCCTCCTGGC TACCATGGCA TATGACCGCT ATGTGGCCAT
141 CTGCAGTCCC TTGCACTACC CAGTCATCAT GAACCAAAGG ACTCGTGCCA AACTGGCTGC TGCCCTCTGG
211 TTCCCAGGCT TTCTGTAGC TACTGTGCAG ACCACATGGC TCTTCAGTTT TCCATTCTGT GGCACCAACA
281 AGGTGAACCA CTTCTTCTGT GACAGCCAC CTGTGCTGAG GCTGGTCTGT GCAGACACAG CACTGTTTGA
351 GATCTACGCC ATCGTCGGAA CCATTCTGGT GGTCATGATC CCCTGCTTGC TGATCTTGTG TTCCTATACT
421 CGCATTGCTG CTGCCATCCT CAAGATCCCA TCAGCTAAAG GGAAGAATAA AGCCTTTTCT ACATGTTCTT
491 CACACCTCCT TGGTGGCTCT CTTTCTATA TATCATTAAG CCTCACCTAC TTCCGGCCTA AATCAAATAA
561 TTCACCTGAG GGCACGAAGC TGCTATCATT GCCTACACTG NTATGACTCC A

SEQ. ID NO:54

1 GTTNTTCCAT GGACTIONCAA GCAGTGGTAA CAACGCAGAG TACGCCCCCT ATGTACTTAC TTCTTGCTGG
71 CTTATCATTT ATAGATATCA TTTATTCTTC ATCCATTTCC CACAGATCGA TTTGAGACTT GTTCTTTGGG
141 AATAATTCCA TATCCTTCCC ATCTTGCTTG GCCAGCTCT TTACAGAGCG CTTTTTGGT GGGTCAGAGG
211 TCTTTCTTCT GTTGGTGATG GCCTATGACC TTGCATTACT TGGTTATCAT GAGACAATGG GTGTGTGTTT
281 TGCTGCTGGT AGTGCTCTGG GTTGGAGGAT TTCTGCACTC AGTATTTCAA CTTAGTGTTA TTTATGGGCT
351 CCCATTCTGT GACCTCAATG TCATTGATCA TTTTCTCTGT GATATGCACC CTTTATTGAA ACTGGTCTGT
421 ACCGATACCC ATGTTATTGG CCTCTTAGTG GTGGCAATGG AGGACTAGGT TGCATAATTG GGNTTCTGCT
491 CTTACTCATC TCTTATGGNN CATCTGCACT CTCTAAAGAA CCTTAGTCAG AAAGGGAGGT GAAAAGCCCT
561 CTCAACCTGC AGTTCCACAT AACTGGGGGG TGGTTTCTTC TTTGTN

SEQ. ID NO:55

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1 TTANNCCNNT TNAATNCCNT TGGAGCTCCA AAGCAGTGGT AACAAACGCAG AGTACGCCCC CAATGTACTT
71 GCTTCTTCTT TTTTGGGGCT GCTGAGTGCT GCCTCCTGGC CACCATGGCA TATGACCGCT ACGTGGCCAT
141 CTGTGACCCC TTGCACTACC CAGTCATCAT GGGCCACATA TCCTGTGCCC AGCTGGCAAG CTGCTCTTG
211 GTTCTCAGGG TTTTCAGTGG CCACTGTGCA AACCACATGG ATTTTCAGTT TCCCTTTTGG TGGCCCCAAC
281 AGGGTGAACC ACTTNTTNTG TGACAGCCCT CCTGTTATTG NACTGGTCTG TGCTGACACC TCTGTGTTTT
351 GAACTGGAGG CTCTTGACAG CCACTGCCTA ATTCATTCTC TTTCTTTTCT TGCTGATCCT GGGATCCTAT
421 TTCGCATTCT CTTCACTATC TTTAAGGATG CCGTCAGCTG AGGGGAAACA TNAGCATTCG NCACCTGTTT
491 CGCCCACCTC TTGGGTGGCT CTCTCTTCTA TAGCACTGGC AATCCTTAAC GTATTTTCCG ACCCCAATTC
561 AAGTGCCTTT TTNTGAGAAG CAAAGAAACT GGTGTGCTACT TTTTTCAC AAGGGGNGAC TTCCAATGTT

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SEQ. ID NO:56

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1 GNGNTTTNNN CCATGGAGCT CCAAAGCAGT GGTAACAACG CAGAGTACGC CCCCCATGTA CTTTCTTCTT
71 CTTTGGAGTG GCTGAATGCT TCCTCCTGGC TACCATGGCA TATGACCGCT ATGTGGCCAT CTGCAGTCCC
141 TTGCACTACC CAGTCATCAT GAACCAAAGG ACTCGTGCCA AACTGGCTGC TACCTCCTGG TTCCCAGGCT
211 TTCCTGTAGC TACTGTGCAG ACCACATGGC TCTTCAGTTT TCCATTCTGT GGCACCAACA AGGTGAACCA
281 CTTCTTCTGT GACAGCCCAC CTGTGCTGAG GCTGGTCTGT GCAGACACAG CACTCTTTGA GATCTACGCC
351 ATCGTCGGAA CCATTCTGGT GGTCAATGATC CCCTGCTTGC TGATCTTGTG TTCCTATACT CACATTGCTG
421 CTGCCATCCT CAAGGTCCCA TCAGCTAAAG GGAAGAATAA AGCCTTTTCT ACATGTTTCT CACACCTCCT
491 TGNTGTCTCT CTTTTCTATA TATCATTAAG CCTCACCTAC TTCCGGCCTA AATCAAATAA TTCACCTGAG
561 GGCAAGAAGC TGCTATCATT GNCCTACACT GTTATGACTC CATGTTGAAC CCCATAATTT ATTCATTGAG
631 C

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SEQ. ID NO:57

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1 TTATNNCCAT TGGAGCTCCA AAGCAGTGGT AACAAACGCA GAGTACGCC CCGATGTATT TTCTTTTCTT
71 TGGGNGAGCT GNATGCTTCC TNCTGGCTAC CATGGNATAT GACCGGCTAT GNGGNCATCT GCAGTCCCTT
141 GNNCTCCAG TCATTATGAA CCAAAGGACA CGGGCCAAAC TGGCTGGTGN TTCCTGGGTC CCAAGCTTTC
211 CTGNAGCTAC TGNGCAAGAC CACAATGGCT CTTNAGNTTT CCATTCTGNG GCACCAACAA GGTGAACAC
281 TTNTTCTGN GACAGCCGGC TGTGCTGAAA GCTGGTCTGN TGCAAGACAC AGCACTGTTT GAGATCTACG
351 CCATCGTCGG AACCATTCTG GTGGTCAATG AACCCTGCT TGCTGATCTT GNGTTCCTAT ACTCGNATTG
421 GTGCTGCTAT CCCTCAAGAA CCCATCAAGC TAAANGGAA GCAATAAAGN CCTTCTCTA CGTGCTCCTT
491 AACACCTCCC TTGGTGGCCT CTCTTTCTA ATATAATCNT CTAAGCCTCA ACCTACTTCT TGGGCCTNAA
561 NTCAAATAA TTCTTCTGGA GAGGCAAGAA GGTGGTATT CATTATNCTA CACTGGTNGN GACTCCATGN
631 TGGAAC

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SEQ. ID NO:58

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1 GTNATNCCNT TTAATNCCNT TGGAGCTCCA AGCAGTGGTA ACAACGCAGA GTACGCCCGT TCCTCAGACA
71 GTATATGAAT GGGTTAAAAA TGGGCCAGAG CAGATGCAGG AAGATCAAAT AGGAGGCTAC TGCAGTAGAG
141 TCAAATCTAG GGCTGATGGT TTCTTGGGAT GCATAGTAAT AGGTAGATAG AGAAAGTCTT TAGGAGGTAG
211 AATGGACAGG ACTTCACAAAT GCATTAAATG TAGGGAGAAA AAAAATGATT CCTGGGTTTC TAGCTTGAGC
281 TAGTAGGGAT AGTGGTAGAA TTTACTGATA TGGAAACTG GAGGAAAAAG AGTTTGAAG AGAAAGATGG
351 CAAGTTAAAT ACCTGTGGGA AATATAATCA CAGACACTAA ATAGGCAGCT GTGTGGGTGG CAAAGGAGAG
421 CCATGGGCTA GGAACATACA GTGGGATTCC CTGGCATGTC ATTGGTTACT GAAGTCAGAG TGTATGAGAC
491 AGCCTAAGGA GAGAATNCAC ACAGGAGAAG AAAGAATAA ACATTCACTG GCTGGCCAGA GGATGAGAAA
561 CCCAAGAGAT TGGACTGTTT AGGAGCAACA GTGTTGNGAA AAGGGAGAAA NGGTTGAAAT T

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SEQ. ID NO:59

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1 GGNTTTANNC NCTGGAGCTC CAAAGCAGNG GTAACAACGC AGAGTACGCC CATTGCGTAG CGTGTACATA
71 AAGGGGTTGG AGCTGAAGGA GAGATATAAG AAGAAGACAG CCAGAACCCT GTCTCTGTC GGAGATCGCA
141 GGGATCTTGG GCCGTAGATA GGTATAAGCA AAGGGTGCAT AGTAGAAAGT CACTACAGTG AGGTGGGTGC
211 TGCAGGTCGA ATAGGCCTTC TTCCTCCCTT CTGCAGAGTG CATGTGGTAG ACAGCAAGGA GAATCCGGCC
281 ATAGGAACAT GCAATACAAA TGAAGGAAA CACAAGAAA ATGGTGGTGC TCAAAAACAC CGTGCACTCA
351 TAGACCCAGG TATCCGTGCA GGCTAGGGTC AACATAGCTG GAACATCACA GAAAAATGA TTGATGGCTC
421 TGGACTTGCA ATATGGGATA CGGAGTGCAT ATACCGTGTG AGCACAAGAG TTGATGGAGC CTATCATCCA

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491 AGATCCTGTT ATCATCAGTG CACACACTCT TTTTCTCATA CGGATGAGAT AGTGGAGAGG AAAGCAAATA
561 GCCACATAAC GATCATAGGC CATTGATGTC AGGAGCAGCG CTTCTGCACC TGCTAAAGTC AGGAAGAAGA
631 T

SEQ. ID NO: 60

1 TGTANTCCN NTTTNCNCC ATTGGAGCTC CCAAGCAGTG GTAACAACGC AGAGTACGCC CTCCTTGTTT
71 CTGAGAGTGT AGATGAAGGG GTTATAGGAG ATAAAGATCA GGGCAATATG TAGGACAAGG ACACAGACAC
141 TGACAACAAA GTTGATTATC TCATTGACAG TGGTGTCTGT GCAGGCCAGC TTCAGCAGGG GTCTCACATC
211 ACAGAAGAAG TGGGAGATGA CAAAGTCATC ACAAAGGGC AGGCCAAACA TAGATGTTAC TTGGACAATA
281 GCCATGCCCA GGCCAATCCT CAGTGACCCA GATCCCAGTC AGACACAAGC CCTCTTACCT ATGAATACCG
351 TAAGGGGTTG CAGAAGACCA CATAGCAATC ATATCCCATG GCTATGAGAA GAAAGCAGTT GTTGATGCCA
421 AAAGTCACAT AGAAGAGCTG AGTGACACAG CCTTGCATGA CAATAAGCTA GTGAGGATTC AAGAGGCGAG
491 AAAGCATATG GGGAGTAATG GCCACCATGT AGCAGGTCTC AGAGATAGAC AGCAATGCTT AGGAAAAAGT
561 ACATGGGCCG TACTTCTGTC GTCTTGAGCG TACTGATGGT ACCCAGCTTT TGTTCCCTTT

SEQ. ID NO: 61

1 GTNANNCCNN TGTAGCTCCN AAGCNGAGCT AACAAACNNAG AGAACAACGC AGAGTACGCC CCCGATGTAC
71 TTGTTCTTAC TCTTTGCTGG ATTTGAAAAC TTCCTCCTGT CCGTGATGGC CTATGACCGG TTTGTGGCCA
141 TCTGTCAACC CCTGCACTAC ATGGTCATTA TGAACCTCA CCTCTGTGGA CTGCTGGTTC TAGCATCCTG
211 GACCATGAGT GCTCTGTATT CCTTGCTACA AATCTTAATG GTAGTACGGC TGTCCTTCTG CACAGCCTTA
281 GAAATCCCCC ACTTTTCTG TGAACCTAAT CAGGTCATCC AACTTGCTTG TTCTGATAGC TTTCTTAATC
351 ACATGGTGAT ATATTTTACA GTTGCCTGTC TGGGTGGAGG TCCCCTCACT GGGATCCTTT ACTCTTACTC
421 TAAGATAATT TCTTCCATAC ATGCAATCTC ATCAGCTCAG GGGAAGTACA AGGCATTTTC ACCTGTGCAT
491 CTCACCTCTC AGTTGTCTCC TTATTTTATG GTGCAATCCT AGGGGTGTAC CTTAGTCTGC TGCCACCCGC
561 AACTCACACT CAAGTGAAC AGCCTCAGTG ATGTACACTG GGGCACCCCC AT

SEQ. ID NO: 62

1 GNNNNNNNAT TTNATGCCNT TNTTGATTCC CNTTNNNNNN NCAAGCAGNG GTAACAACGC AGAGTACGCC
71 CCCTATGTAT TTCTTCTTAA GATCCAAATA TTAAATAAA AGACAGTCAT CCCACCACTA ACTAAAGTAG
141 TGTTTCCAC ACTTCTCTAT TAAGAAGCAT GTGAGATACT TGTACAAAC ATAACATCCT GGTCCCACCC
211 CAAAGCCACT CAATCAAATA CTCCAGGGAA GGGATCTAGG AATTTCGTAGG TTAAACGAGT GCCCCAAAT
281 GATTATTACC TGTTGGAGAA TCTAGGCAAC AATGAATTA GGAAGCTCT CTACCATTTG GTACTGGTAC
351 CAGGTTTGAG GATCACAGGG AAGAGGGTAA GCATATCAGA CTAGCAGAGC TGCCAGAAGT CGGGCTTTCA
421 AAAGAGAGGT GCCACCCTCT CCCATGTCCA TGTAAGTAGC AAACAACCTT CTCATGTACA CTCTGAGGAA
491 CAAGGGGGCG TACTTCTGTC GTCTTGAGCG TACTGATGGT ACCCAGCTTT TGTCCCTTTA GTGAGGGTTA
561 ATTGCGCGCT TGGCGTAATC ATGGTCATAG CTGTTTCTG TGTGAAATTG TTATCCGCTC ACAATTCT

SEQ. ID NO: 63

1 TGTAGCTCCA AAGCAGTGGT AACAAACGCAG AGTACGCCCT CTTGGTTACG TAAGGGAATA GATGATGGGG
71 TTCAGCATGG GGGTGACTAC AGTGATACATG ACAGTGGCCA CACGGTCCCA CTCTGCTCGC GTCGGGACGT
141 GGCTTGAAG TAGACTGCAA TGACTGTCCT ATAGAAAGAG GCTCACCACA NCCAGGTGGG AGCCACAGGT
211 GGGNCACAAG TCCCGGAGCC TCCAGAGGC TTGAGGGCAG CTGGAGCACG GGNAAGCTTG NTATGGNCCC
281 ACAAGGAGGC GAGGATGAGC AGNAAGGGAG TGACCACCAC TTGCNGCGCC CTNGGTGAAG ATGAGCAGCT
351 TGGATGTGGT GGNTGTCAGA GCACGAGAGC CTTTAAGAGA GGCTTGGTGG GTCCACAGAAG AAGTGGGNGC
421 ACTTTGTGGG AAAGCACAGA AAGGACAAGC GAGGCATGAG CAGGATATAC AGGAGGGAGT TGTCCGTGGG
491 ACACCAGCCA TGCCATTCCA ACCAGGGCTG CGCACATNGC CGGGGACATT CTCGTGGGAT AAGGGAAGGG
561 GTGCCGGATN GGCACGTATC AGTCATAGGC CTTGGNCGCC AGAAGACAGC TTTNAATTTA CCCCAGG

SEQ. ID NO: 64

1 GTTANNCCNT NTANCTNCAA NNGAGGTAAC AACGCAGAGT ACGCCCCCA TGTATTTGCT TCTTGTCCAA
71 CCTGTCTTTT GTAGAGATCT GCTACACCAC CGTGTGGTG CCCTTGATGC TTTCCAACAT TTTTGGGGCC
141 CAGAAGCCCA TTCCATTGGC TGGATGTGGG GCCAAATGT TCCTCTTTCT CACACTTGGT GGTGTGACT
211 GTTCTCTCTT GGCGATCGTG GCCTATGACC GCTATGTGGC CATCTGCCAC CCTTTGCACT ACCCTCATC
281 ATGACCTGCA GTCTGTGCGT GCAGATGCTG GCGGCGCTG TGGGCTGGC CCTCTTCTC TCCCTGCAGC
351 TCACCGCCTT AATCTTCACC TTGCCCTTCT GCGGCTACCG CCAGGAAATT AACCATTTC TCTGCGATGT

421 ACCTCCGTCC TGCGCCTGGC CTGCGCTGCA TCCGTGTTCA CCAGGCTGCC TCTATGTCGT GAGCATCCTC
 491 GTGCTGACCG TCCCCTTCTT GCTCATCTGC GTCTCCTACG TGTTTCATCAC CTGTGCCATC CTGAGCATCC
 561 GTTCTGCTGA GGGCCGGCAC CAGGCCCTTT CAACTGCTCT TCCGG

SEQ. ID NO: 65

1 TGTAGCTCCN AAGNNGAGNT ANCAACGCAG AGTACGCCCC CGGAATCTAT AGATGAAAGG GTTTGGNGAG
 71 TCAGAAGAAG GAAGTACATG GGAGTCATAA CAGTGTAGGA CAATGATGGC AGCTTCTTGC CCTCAGGTGA
 141 ATTATTTGAT TTAGGCCGGA AGTAGGTGAG GCTTAATGAT ATATAGAAAA GAGAGACAAC AAGGAGGTGT
 211 GAGGAACATG TAGAAAAGGC TTTATTCTTC CCTTTAGCTG ATGGGATCTT GAGGATGGCA GCAGCAATGT
 281 GAGTATAGGA ACACAAGATC AGCAAGCGGG GGATCATGAC CACCAGAATG GTTCCGACGA TGGCGTAGAT
 351 CTCAAAGAGT GCTGTGTCTG CACAGACCAG CCTCAGCACA GGTGGGCTGT CACAGAAGAA GTGGTTCACC
 421 TTGTTGGTGC CACAGAATGG AAAACTGAAG AGCCATGTGG TCTGCACAGT AGCTACAGGA AAGCCTGGGA
 491 ACCAGGAGGT AGCAGCCAGT TTGGCACGAG TCCTTTGGTT CATGATGACT GGGTAAGTGC AAGGGACTGC
 561 AGATGGCCAC ATAGCCGGTC ATATGCCATT GGTAGCCAG GANGAAGCT

SEQ. ID NO: 66

1 GTTATNCCTT GTTGCTCCCN AGCAGAGGTA ACAACGCAGA GTACGCCCCCT ATTTCTCAGA TATANGATGA
 71 AGGGGTTTCAAG AAAAAGAATG AGCAAGAAAA ATCTGGGCCA GGCGGGCATC AAAAGAAATA GTCTTGTGCT
 141 CAACCAGAAA GTCTGCAATC ATTTTAGGGG TAGCAGAAGA GGCAACACAT ACGTCTATAA ATGACAGGTT
 211 GGCAAGAAGC AAATACATTG GGGGCGTACT TCTGTCGTCT TGAGCGTACT GATGGTACCC AGCTTTTGT
 281 CCCTTTAGTG AGGGTTAATT GCGCGCTTGG CGTAATCATG GTCATAGCTG TTTCCTGTGT GAAATTGTTA
 351 TCCGCTCACA ATTCCACACA ACATACGAGC CGGGAGCATA AAGTGTAAG CCTGGGGTGC CTAATGAGTG
 421 AGCTAACTCA CATTAATTGC GTTGCGCTCA CTGCCCCGCTT TCAGTCGGGA AACCTGTCGT GCCAGCTGCA
 491 TTAATGAATC GGCCAACGCG CCGGGGAGAG GCGGTTTGCG TATTGGGCGC TCTTCCGCTT CTCGCTCACT
 561 GACTCGCTTG CGCTCGGTG TTCGGCTTGC GGCGAGCGGT ATCAAGCTCA CTCAAT

SEQ. ID NO: 67

1 GGGTTTTACN CTGTGCNCCC CCAGCAGNGG TAACAACGCA GAGTACGCCC TTGTTGCGAA GAAATAAATG
 71 AATGGGTTTA AAATAGACGT GAAGATGGTG TAGAATACAG CAAGGACTTT GTCAACTGAG TAAGTGTGA
 141 AGGGCCACAC ATAGATGAAA ATACACGATC CAAAGAATAA AGTGACCACA GTGATGTGAG CAGTCAATGT
 211 GGAGTGGGCC TTCACCATGC TTACAGAGGA GCGATTCCCTA ACTGTAATAA GTATTACAGT GTAGGANACA
 281 ACCAANAGGA GAAAGGAACT CAGAGAAAGA AAGCCACCAT CTGCAACTAT TAGTAGGCTG ACAACATAAG
 351 TGTCTATGCA GGCTAACTTN GTNGCTAGAG GAAGGTCACA GAAAAAACT ATCTACCTTA TTAGGACCAC
 421 ANAATGGCAG ATTAACCGTG AATGCCAACT GGCTGGTGGT ATGGATGAAG CCCACAAACC AGGAAATGAG
 491 GACGAGCACA ACACATACAC AGNAGCTCAT GATTGANATG TAGTGNGGAG GTTNTCTNTN GCTCATANCC
 561 GTNTTNGCCA TNGNAACTNG GANCAACATT TTACTTGCGAG TGNNGGAGNG AACATGAAAT N

SEQ. ID NO: 68

1 GTTANNCNN TTTAATNCNA TGGAGCTCCA AAGCAGTGGT AACAAACGCAG AGTACGCCCC CGATGTACTT
 71 GTTCCTACTC TTTGCTGGAT TTGAAAACCT CCTCCTGTCC GTGATGGCCT ATGACCGGTT TGTGGCCATC
 141 TGTCACCCCC TGCACTACAT GGTCAATTATG AACCCTCACC TCTGTGGACT GCTGGTTCTA GCATCCTGGA
 211 CCATGAGTGC TCTGTATTCC TTGCTACAAA TCTTAATGGT AGTACGGCTG TCTTCTGCAC AGCCTTAGAA
 281 ATCCCCCACT TTTTCTGNGA ACTTAATCAG GTCATCCAAC TTGCTTGTTT TGATAGCTTT CTTAATCACA
 351 TGGTGATATA TTTTACAGTT GCGCTGCTGG GTGGAGGTCC CCTCACTGGG ATCCTTTACT CTTACTCTAA
 421 GATAATTTCT TCCATACATG CAATCTCATC AGCTTAGGGG AAGNACAAGG CATTTTCCAC CTGTGCATCT
 491 CACCTTTTCA TTTGCTCCTTA TTTTATGGNG CAATCTAGGG GTGACCTTAG TTTTGCTGNC ACCCGCAACT
 561 CACACTTAAG TGCAACAACC TCAGTGATGT ACCTGGGGT CACCCCATGC C

SEQ. ID NO: 69

1 GNGNNNCAG NTTANNCCTT GGAATCCCAG TAGAGCTACN ANGANTNCGC CNAGCGCGCA NTTNNNCAG
 71 GGTNNNTNTN GTATACCAA TGAATAGAAA ACAGACACCA CCTTGTCCTT CCTAGCAAG TAGCTGGAGC
 141 TGGGTCGCAA GTACACGAAA AGGGCTGTCC CAAACAGCAG AGTCACCACT ATCAGATGCG AGGCACACGT
 211 GTTGCAGGCT TTCCATCGGC CCTCTGCTGA AGGGATCTTC AGGACCGCAG AACTATGTA ACCATAGGAG
 281 ATAAGGAGTT GGAGGAACGA TGTTCTCTCCG ACGGTGACCA CCACGAGGAA ATTCACCACT TGACTGAGGA
 351 AGGTGTCAGA GCAAGACAGA GCCAGGACTG GTGGGAGGTT GCAGAAGAAG TGTTTGATGA TGTTGGGTCC

421 GCAAAAGTGA AGCCTAAATA TGGAGCTGGC CTGGATCAGG GAGCTCAGGA AGCCACCAAC ATATGCCCCA
491 ACCACCATGC GTGTACAGAG GCCCTGGGTC ATGATAGTGG GGTANAGAAG GGGGCTGGAG ATGGCTTGCA
561 TATCGGTCGT ATGCCATAGC AGTCANGAGG AGGCACTCAA GACAGACCCA TGCCGACNAA GAAAT

SEQ. ID NO:70

1 GNNNNTTTTA CCCCTGNNGC ACANAGCAGT GGTNACAACG CNCGAGTACG CCCCTATGT ATTTTTTCCT
71 ATTCTGGACA CGCTACTCCT GACCGTGATG GCCTATGACC GGTGTGTGGC TGTCTGCCAC CCTCTGCACT
141 ATATGATCAT CATGAACCCC CACCTCTGTG GCCTCCTGGT TTTTGTACAC TGGCTCATTG GTGTCATGAC
211 ATCCCTCCTC CATATTTCTC TGATGATGCA TCTAATCTTC TGTAAGATT TTGAAATTCC ACATTTTTTC
281 TGCGAACTGA CGTACATCCT CCAGCTGGCC TGCTCTGATA CCTTCCTGAA CAGCACGTTG ATATACTTTA
351 TGACGGGTGT GCTGGGCGTT TTTCCCTCC TTGGGATCAT TTTCTCTTAT TCACGAATTG CTTTCATCCAT
421 AAGGAAGATG TCCTCATCTG GGGGAAAACA AATAGCACTT TCCACCTGTG GGTCTCACCT CTCCGTCGTT
491 TCTTTATTTT ATGGGACAGG CATTGGGGTC CACTTCACTT CTGCGGTGAC TCACCTTCC CAGAAAATCT
561 CCGTGGCCTC GGTGATGTCA CTGNGGTAC CCCATGTTG ACCCTTTCAT TTACACCTT AGCAAG

SEQ. ID NO:71

1 GNNNNNNNNN GTTNATNCCN NTTTTAATGC CANTNGAGNT AACAAACGCAN GAGTACNCCN NNGNGTACGC
71 CCAGGGTTCA ACCNNTGAAT AGAAAACAGA CACCACCTTG TCCCTGCCTA GCAAGTAGCT GGAGCTGGGT
141 CGCAAGTACA CGAAAAGGGC TGTCCCAAAC AGCAGAGTCA CCACCATCAG ATGCGAGGCA CACGTGTTGC
211 AGGCTTTCCA TCGCCCTCTG CTGAAGGGAT CTTCAGGACC GCAGACACTA TGTAACCATTA GGAGATAAGG
281 AGTTGGAGGA ACGATGTTCC TCCGACGGTG ACCACCACGA GGAAATTAC CACTTGACTG AGGAAGGTGT
351 CAGAGCAAGA CAGAGCCAGG ACTGGTGGG AGGTTGCAAG AAGAAGTGGT TGATGATTGT TGGGTCCCGC
421 AAAAGTGAAA GCCTAAATAT NGAGCTGGCC TGGATCAGGG GAGCTCAGGA AGCCACAACA TATGCCCAA
491 CCACCATGCG TGTACAGAGG CCCTGGGTCA TGATAGTGGG GGTNGAGAAG GGGGCTGGA GATGGCTGCA
561 TATCGGTCGT TGCCATAGCA AGTCAGGAGG AGGCACTTCA GACAGACCCA TGCCNCNAAG AAAAAAACT
631 GNC

SEQ. ID NO:72

1 GNNNNNNNNN NTTNNNNCN TNACTCCNGC AGTGGTAACA ANNANTACGC NCAGCGCGCA GTTAACCCTC
71 ACTAANGGTA ANNTNAGCTG GAACACATCA NTACGNTCAN GNNNGCNCNA TGACCGTTT GTGGNCATNT
141 GTCACCCCTT GCACTACATG GGTCAATTATG AACCCTCACC TCTGTGGACT GCTGGTCTA GCATCCTGGA
211 CCATGAGTGC TCTGTATTCC TTGCTACAAA TCTTAATGGT AGTACGGCTG TCCTTCTGCA CAGCCTTAGA
281 AATCCCCCAC TTTTCTGTG AACTTAATCA GGCATCCAAC TTGCTTGTTT TGATAGCTTT CTTAATCACA
351 TGGTGATATA TTTTACAGGT TGCGCTGCTG GGTGGAGGTC CCCTGACTGG GATCCTTTAC TCTTACTCTA
421 AAGATAATTT CTTNCATACA TGCAATCTCA TCAGCTCAAG GGGAAAGTCAA GGCAATTTTC ACCTGTGCAT
491 CTACCCCTCA GTTGCTNCTT ATTTTATGGN GCAATCCTAG GGGTGACCTT AGTTCTGGTG GCACCCGCAA
561 CTACACTCAA TGCACAAGCT CAGTGATGTA CACTGTGGCA CCCATGCTGA ACCN

SEQ. ID NO:73

1 GTNNNNNCCNN TTGATTNCCA TTGGAGCTCC AAAGCAGTGG TAACAACGCA GAGTACGCCC CCTATGTATT
71 TTTTCTATT CTGGACACGC TACTCCTGAC CGGGATGGCC TATGACCGGG TTGNGGCTGG CTGCCACCCT
141 CTGNANTATA TGATCATCAT GAACCCCCAC CTNTGTGGCC TCCNGGTTTT TGNCACCTGG CTCATTGGTG
211 TNATGACATN CCTCCTCCAT ATTTCTCTGA TGATGCATCT AATCTTCTGT AAAGANTTTG AAANTNCACA
281 TTTTTTTNTG CGAACTGACG TACATNCTCC AGCTGGCCTG CTCTGATACC TTCCTGAACA GCACGTTGAT
351 ATACTTTATG ACGGGTGTGC TGGGCGTTTT TCCCTCCTTG GGATCATTTT CTCTTATTTC ACGAATTGNT
421 TTNATCCATA AGGAAGAATG TCCTCATNTG GGGGAAAACA AATAAGCACT TTNACACCTG TGGGNTCAA
491 CCTCTCCGN CGTTTCTTTA TTTTATGGG ACAGGCATTT GGGGTCCAC TTTACTTTTT GNGGNGACTC
561 ACCCTTCCA GAAAANTTTC CGTGGGCNTC NGGGATGTAC ACTGGNGGCA CCCCATGTT GAACCTTTT

FIGURE 2

SEQ. ID NO: 111

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gggtcccntcg ngtatncntt naccctctga tgetgctcga ggggccggca gggatgatga 60
tatctgcaga attcgccctt ctgttacgca ggaatatata aaggggttac tgaggaataa 120
ataaatgggt tactgaggaa taaataaatg gggtactgag gaacaaatac atagggttga 180
aagaactgta aaatagaaaa aggaccttnt gctgctcctc aggatggcgg nacttagggg 240
ccatgtacat gacgatgnng ctgccnntna agagtccac tntcaneng cctcagcccg 300
ncttttntct cacnnncnt nttntctnc cctctnnnc tctttntctc ctattcccc 360
cccttccnt cctccctttt gcnthacat tgnccctnat ccctttaatt cnntcnntcn 420
tctccccctt attccttcnn tnttcgnctt cantctctnc ctctttctcc ccnctttct 480
ctctctctct ctctctctng tcctctctgt tcnttctctt nctanttec ctctancctt 540
ntcttattnc tctctatnc cctctcatct cactctctnt cctctctnc tactnnctc 600
nctctctcn cctcgtctc cctttctct tcntnacgcc accctcnnn cntnctctc 660
ntctctctc cactctctc tctccctnnc cntcactnt ctcnctctc acntcctatn 720
ctcncttct nctttnact tgtcacgct tctctctct ctctacgcac nttttatctc 780
ttatctcnnc catnccctc nntctnnc nctattnact cttttctcnc atactntatn 840
ctcctntcnn cttanatnc ctccttctn tnanccntc actgen 886

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SEQ ID NO: 112

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gctgctcgag cgnccgagcg tcggcagtg nagggnnatn tgcnnnnntn gcnnttagat 60
nanaggntn agtatggggg tgaccacagt ggtacataac tgaggctgtt gcacttgagt 120
gtgagttgag ggtggcagca gaactaagg acaccctag gattgcacca taaaataagg 180
agacaactga gaggtgagat gcacaggtg aaaatgcctt gtacttcccc tgagctgatg 240
agattgcatg tatggaagaa attatcttag agtaagagta aaggatccca gtcaggggac 300
ctccacccag cagcgcaact gtaaaatata tcacctgtg attaagaaag ctatcagaac 360
aagcaagttg gatgacctga ttaagttcac agaaaaagtg ggggatttct aaggctgtgc 420
agaaggacag ccgtactacc attagattt gtagcaagga atacagagca ctnatggtcc 480
aggatgccag aaccagcagt cacagagggt gngggtttca tantgnccct gtagngtcag 540
cnnngacna gatggccnca aaccgntctt nggccctcac gncctggna ggnggttttc 600
tantccacca cnnntnttct nannc 625

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SEQ ID NO: 113

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catgcnngag caggctcgag cgccggcagn gtgagggata tctgcagaat tcgcccttcc 60
tatgtacttt ttctgagcg tatacacaat cccatcatgt actggggaga agncagacca 120
tatcattnac aagctgnctt tngcagatgn actttgnttt ctcataggc tgcncagagt 180
acttctctct ggcagccatg gcttatgacc gctgtcttgc catctgctat cctttacact 240
acggagccat catgagtagc ctgctctcag cgcagctggc cctgggctcc tgggtgngtg 300
gtttcgcgcn cantgcagcg ccacagccc tcagnagcgg tcttgcctt ctgngncccc 360
cgtgccatta accactnctt tngcngcant gnccttgca ttgtcttgc ctgccacca 420
nacagcagna nancntgnn cnntngatc gctgntnccg tctcngntct cactccttcc 480
cacctttnc ntcgcatctc nntntcnn ctcnctctc gncnntcnn tctctcttcc 540
tnaacgcgtc ctccgannng nctnnatgnt cgtctctnn ntgngcnng ncagennnnn 600
nnccannnn tngtgcgcc gctcc 625

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SEQ ID NO: 114

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gnttaagccc tnnccctctn gangcatgct cgagcggccg ccagtgtgat ggatatctgc 60
agaattcgcc ctgttccgc aaacaataga tgaaaggatt aagtgaagga gtgcccaccg 120
catagaagag accaaagaac ttgccctcc cttgggcata cgatttttg ggctggaggt 180
agacagcnat gactgagctg tagaagagg tgaccacagt gagatgggag gagcaggtcc 240
caaaggcctt tctccatgct gtggcagagt taatcctcag cactgcctgg gcagtggctc 300
cataagaggg aaggatgagg ctgagaggca caaccacgaa gatgacactg gacacagcca 360
actggatttc attgnaggag gcactccac aggagagtn gnatcagaga tgggancctc 420
acataaaaaa gtcactctac tngtggtggg gacagaatgn ccatgtggag gntnnatgtn 480

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cgtntcnnac ctcttatttt tntnccctt ttctttcgct cnnccccnt tntcccnnet 540
cgccanttec atncnctct ntcnnttttt ttntntnacc ntntntcat ntctctctt 600
tattctcttt ctcttgntct tcccttctct ctctntttcc canctctccc g 651

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SEQ ID NO: 115

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ggntctcggt acaanacttg gccctctaga tgcattgctg agcggccgcc agtggtgatgg 60
atatctgcag aattcgccct tccaatgtat ttattcctgt tatttgagaga cctggagagc 120
ttcctccttg tggccatggc ctatgaccgc tatgtggcca tctgcttccc cctgcactac 180
accgccatca tgagcccat gctctgtctc gccctgggtg cgtgacctg ggtgctgacc 240
accttccatg ccatgttaca cactttactc atggccagnt tgtgcttntg tncnnacna 300
ttgttgntnc cccactnnnc tntgtntna gtctnctctn centnnactg ctctctctct 360
tntccnnga gtcctcnggn nncgtngtcg ntnncngcn tcaattgcan tncnnctc 420
atcctttctt tantntcca tntnttact nattnctctt tatecncnnt ntccccctcc 480
anctcctnct tagcttactn ttctntgctc tccngngctc ancttttctn ccataatntc 540
ttctctcnct tntctctcnc tnnnncccn nntctctctg ntctctgctc cntcttnacg 600
tctnnnctt tatttantnt ctncncnctn tctcnnctc cancgngta ccngccctat 660
nnnctctcc gannntgntc atggcatctn cacattnngc cctactatnn ncgatctatn 720
ttcncgcat ntattncaca tccacntgca ctctactcn ctctctancc nccgtacac 780
gcnncctacg ntgnenctn nccgctctn cgcccnctat nctccactt tntctnggtc 840
ccccctctcg 850

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SEQ ID NO: 116

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gatgatgct cgagcgcccg cagtgtgatg gatattctgca gaattcgccc ttccaatgta 60
ctttttctcg aagaacctct ctgttttgga tctgtgctac atctcagtea ctgtgcctaa 120
atccatccgt aactccctga ctgcagaaag ctccatctct tatcttggtg gtgtggctca 180
agcctatctt ttctctgctt ttgcatctgc tgagctggcc ttccctactg tcatgtctta 240
tgaccgctat gttgccattt gccacccct ccaatacaga gccgtgatga catcaggagg 300
gtgctatcag atggcagtea ccacctggct aagctgcttt tctacgcag ccgtccacac 360
tggcaacatg ttctgggagc acgtttgcag atccaatgtg atccaccagt tcttccgtga 420
catccctcag gtgttggccc tggtttctg ngaggtttct tttgtagagc tttgaccng 480
ccctgagcct caatgcttgg ntctgggatg ctttattccc atgatgatct ccnattttcc 540
anatctctn aanggggctc nagaatccct tnaggaccag antcnagcta aaagcctttn 600
ccnctgct tccccccacg 620

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SEQ ID NO: 117

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tggcnctcng atgcatgctc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta tttgttctg ttatttgag acctggagag ctctcctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgtgtctc ggggtgctgac cacttccac gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagaaa tgtgatccc cactttttct 300
gtgatatgct tgctctgctg aagctggcct tctctgacac tctagttaat gaatgggtga 360
tatttatcat gggagggctc attcttgcat cccattccta ctnatccttg ggtcctatgc 420
aagaattgtc tctccatcc tcaaggctcc ttcttctaag ggtatctgca aggccttctc 480
tacttggtgc tcccacctg tctgnggtgt cactggttct atggaaccgt tattggtctc 540
tacttatgct cntcagctaa tagttctact cttaaaggaca ctgcatggct atgatgtaca 600
ctgtggtgac ccccatgctg aaccctt 628

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SEQ ID NO: 118

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gatgatgctc gagcgngcgc agtgngatgg atatctgcag aattcgccct tcccatgtat 60
ttgttctga gcaacctctc ctctctggag atttggtata ccacagcagc agtgccaaa 120
gactggcca tctactggg gagaagacag accatatcat ttacaagctg ctttttgag 180
atgnacnntg tttctcant angcctaca gngnncatgt ttncgcnngc cntgacttat 240
gacgcgcntn cnnenctatc nnnntntnct ntnacnctac ttctcatna tntgnenctn 300

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nnttcnccn tggennctcn nntcnegnc ttnccntnqn ncgtentcnc ccttnggcct 360
gcatctctnc ntnttcctnn cenncggnct ntcttccct cntacctnt tctgtntnn 420
tccctccct ctctgnntgc nntcnennn catctnnntg ntctgatcnc tntctnnnt 480
ccatcnngtn ctnttctctc gtntctctcn cncgcncct gcatcactgn gcattatn 540
cnngtctca tnnctatctt cegtntctgt cnccttccct ctatgcncga cgtctnnntn 600
tactatcgtc ntctcnntat tnnngcctgt tccnnngcnc ccgnncntcc anntactctc 660
cangntctc ctnttcctnt ncnctgtcta attcnnctnt accgntctn gntctntcct 720
cgctnntccc nnttctctcc nctcncgnnn ccttcagct ntcnanttct antnngnnn 780
cnc 783

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SEQ ID NO: 119

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nntagatgca tgcctgagcg gcccgccagt gtgatggata tctgcagaat tcgcccttcc 60
tatgtatttc ttccctggcca acctgtcctt ctggagacc tggtagatct ctngactgt 120
gcccaagtta ctgtttagtt ttgtgtctgc gaacaacagc atctctttca cactctgtat 180
gatacaactg tacttcttca ttgtctncat gngcacagaa tgcgtgcttc tggccgccat 240
ggcctatgac cgtatgtgg ncatctggcg cccactccac taccacaacca taantgagcc 300
atgggctcct gctcnnccct cgtntnnna tanngaaccn acagngtagc gncantccc 360
tgtncgagaa tctacttcat cntnctgctt tanntntgt gggcccaatg tgcntaanca 420
cttngntctg nggacatttn ctccagnant tnaantctct tntgcnaca aganactgtt 480
cnttancttg annatnttcn ggnacattnt tccatngggn ttggnacgag cntntctanc 540
accngcactn cncantaant gctncngtct tantcngtgc cattctgtg nctnccntt 600
tcatngcntn nctccncng aaagcnaant aagtngngt cttnacttcc gccccccacn 660
ncatncant ggcc 674

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SEQ ID NO: 120

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ggccctctag atgcatgctc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccatgta ttttttctg ttatttggag acctggagag cctcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgacata caccgccatc atgagcccca 180
tgctctgtct cgcctgggtg gcgtgtcctt ggggtgtgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cacttttct 300
gtgatatgtc tgcctgtctg aagctggcct tctctgacac tctgagttat gaatgggtng 360
atatattatca tngagggct cattcttctc atccattcc tactcatcct tgggtcctat 420
gcgagaattg tctcctcct cctcaaaggc ccttcttct aanggggtatc tgcaaggcct 480
tctctacttg gtggctcccc cctgntctgt ggtgtcactg ttctatttg aaaccgntat 540
tgggactcta cttatgtcct tcatngctaat agttttactc ttangggaca ctgncaatgg 600
cctntgaagn taccctgggn gtggaccccc atnntngaac ccc 643

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SEQ ID NO: 121

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ggccctctag atgcatgctc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta ctttttctg ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgacata caccgccatc atgagcccca 180
tgctctgtct cgcctgggtg gcgtgtcctt ggggtgtgac cacttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cacttttct 300
gtgatatgtc tgcctgtctg aagctggcct tctctgacac tctgagttat gaatgggtga 360
tatttatcat gggagggctc attcttgcct cccattccta ctcatccttg ggtcctatgc 420
aagaattgnc tcctccatc tcaaggncct ttnttctaaa gggatatctgc aaggccttct 480
ctanttggtg ctcccacct gtcttgtggn ttggactgnt tctaatggga accggtat 540
gnancnctna cnttatgtc natcaactta aatagtttct nactttnaaa gggaccactn 600
ntcattggct tanggatngn ncnttggtt cntggaaatc ccnatcatc ttacnng 657

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SEQ ID NO: 122

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atgacctna gatgatgct cgagcgccg ccagtgtgat ggatatctgc agaattcgcc 60
cttccaatgt atttgttct gtccaacctg tcttttttgg atattggctt tatctctaca 120
ataattccca atatgctaga tcatattagc tcaggaatta agctgatttc ttatggggag 180
tgtctgacac aactctattt ctctggccta tttgcagatc tggacaacaa ctttctcctg 240
gctgtgttgg cccttgaccg ctatgtggcc atcagccatc ctctccatta tgcctaacc 300
atgaactccc aacgctgtgt cctgttgggt gctgtgtcat gggatgatcac tattttacat 360
gccctagtgc ataccctcct agtgaccagg ctttccttct gtggtccaaa tattatccct 420
cactttctct gtgatctggc cccactcctg aagctggcct gctccagtac ttgtgtcaat 480
gatctggtgc tcatccttgt ggcaggaaca ctgctgaatg cgcccttgc tgcattctta 540
tgnccacttt ttacattgca ttggccatcc tgagaattga ttcccnagg ggtatgcaaa 600
gggcccctnt ccagctcnc nn                                     622

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SEQ ID NO: 123

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gcnccgcagt gtgatggata tctgcagaat tgcgcccttc aatgtatttg tttctgttat 60
ttggagacct ggagagcttc ctcttgttgg ccatggccta tgaccgctat gtggccatct 120
gcttccccct gcactacacc gccatcatga gcccctatgt ctgtctcgcc ctggtggcgc 180
tgtcctgggt gctgaccacc ttccatgcca tgttacacac tttactcatg gccaggttgt 240
gtttttgtgc agacaatgtg atcccccaat ttttctgtga tatgtctgct ctgctgaagc 300
tggccttctc tgacactcga gttaatgaat gggatgatatt tatcatggga gggctcattc 360
ttgtcatccc attcctactc atccttgggt cctatgcaag aattgtctcc tccatcctca 420
aggctccctc ttctaagggt atctngcaag gccttctcta cttgctgctc cacctgcctg 480
tgggtgtcact gttctatgga accgttattg gtctctactt atgctcatca gccataaagt 540
tttactctaa aaggacactt gtcattggnnt atgatgtacn ctgtgngnac ccccatgctn 600
aaccctntn                                     610

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SEQ ID NO: 124

```

ccttgggccc tctagatgca tgctcgagcg gccgccagtg tgatggatat ctgcagaatt 60
cgcccttctt tattcctgag tgaatatatg agggggttgg cactgctgtt aagagtggac 120
aggaaaatgg aaactagacg aacgtgacaa atccacgtgg atccagaaaa ataggaatca 180
ctgaatgcca aagggcaggt cacagaggag gaagaccagc actctgagca ggatggtcat 240
gtacagcctg gtcaagggca tcttccggga tccacaaagg atcctgacca gcagaaccgg 300
gctggacccg cagagaacca cacataaaaa aatcagccat gtgactgtga tgaaatctga 360
tgtttcacac caaacagaat caagcaccac tagacaggaa gccacagaac atccattcca 420
ggatgctctg cagcaggggac agggcccaga gcaggacaca cgactgctna ccaggtnttt 480
tngngtggct gcnagctctn cttaggatng tccccaaagg ttgncnnggn ccggtnttt 540
gnttgcttnt cgnnncccta nctatgcctt ngctcctgtt nangcttgac nattggncct 600
cncccacngg gcttaannnt ctcnngncgc atttanancg tnatnttact tcccttgtcg 660

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SEQ ID NO: 125

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gnccctctag atgcatgctc gagcgccgc cagtgtgatg gatattctgca gaattcgccc 60
ttcctatgta cttcttctctg ttatttggag acctggagag cttctctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctggtg gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggtc attcttgcga tcccattcct actcatcctt gggctcctatg 420
caagaattgt ctctccatc ctcaaggctc cttcttctaa gggatctctg aaggccttct 480
ctacttngng ctcccacctg tcttngngng cactgttcta tgggaaccgg tattggtctc 540
tacttaatgc tcatcaagct aatagttcta ctctaaagga cactgncatg gctatgatgt 600
acactgtggt gaccccnat gctgacccat tc                                     632

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SEQ ID NO: 126

tctagatgca	tgtctgagcg	gccgcagtgt	gatggatata	tgcagaattc	gcccttccaa	60
tgtacttggt	cctggcagcc	atggcttatg	accgctgtct	tgccatctgc	tatcctttac	120
actacggagc	catcatgagt	agcctgctct	cagcgcagct	ggccctgggc	tcctgggtgt	180
gtggtttcgt	ggccattgca	gtgcccacag	ccctcatcag	tgccctgtcc	ttctgtggcc	240
cccgtgccat	caaccacttc	ttctgtgaca	ttgcaccctg	gattgccctg	gcctgcacca	300
acacacaggc	agtagagctt	gtggcctttg	ngattgctgg	tgtggttatc	ctgagttcat	360
gcctcatcac	ctttgtctcc	tatgtggaca	tcatcagcac	catccttcag	gatccccctt	420
gncagtgcgc	ggagnaanaag	ncctttccac	gtgctcctcg	cncctcnncg	nggtgctcna	480
tttggtatgg	gtccacaagn	tnttctttca	cgncgggatt	ntccattcaa	aagatgncct	540
tgnnntttna	ncaaaagctt	ggncnncgnc	ctgaaanact	gnngtngact	tcangnttta	600
aaactccttt	natntcactn	ttangggaac	naggggcggn	ac		642

SEQ ID NO: 127

ntngccctc	tagatgcatg	ctcgagcggc	cgccagtgtg	atggatatct	gcangaattc	60
gcccttccca	tgtattttatt	ccttagcctg	ttggattccc	agctgcacag	ctggattgtg	120
ttacacaact	caccttcttc	aagaatgtgg	aaanctataa	ttttttttct	gtgacccatc	180
tcaacttctc	aaccttgccct	gttctgacag	catcatcaat	aacatattat	gtatttttaga	240
tatccctata	tttggttttc	ttcccattn	agggatcctt	ttgncttacc	atanaattgt	300
cctcctccat	tccaagaatt	ccattgncag	acgggacgna	tnangccttc	tctacctgtn	360
cncctnacc	gnnagtcgnt	tntttatctn	tgnaantccc	tngggcgncn	nccctgncct	420
cagccttngt	cancnttctc	cncacnnttt	cgctcgtgtt	ncccgatnct	gtncctnctnc	480
tctcctnctc	tttctgcctc	ccctccanng	tctncttttc	tcagcncctt	tnngcncnt	540
gccagcncn	hangntccnc	ccctctccct	cncgtctnct	cncctcctnt	cttctnttcc	600
tnnctcatnn	nnncgncnc	ncgctctccn	ccctntctctn	tacgactccn	gncgtctctn	660
cgctacgac	ctccctgtnc	ncnnccgg				688

SEQ ID NO: 128

gcgtgctgcn	agcggggcgg	cagagtgagc	ggatatctgc	agaatncgcc	cttccgatgn	60
atttctttct	aagcaactta	tctttcattg	acatctgcta	ctcttctgct	gtggctccca	120
atatgctcac	tgacttcttc	tgggagcaga	agaccataat	atttgtgggc	tgtgctgctc	180
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tctgtacacg	catggtgggt	gnggcataatg	ttggtggctt	cctgagctcc	ctgatccagg	360
ccagnnccat	atttaggctt	cactttttgcg	gacccaacat	catcaaccac	ttcttctgcg	420
acctccacca	gtcctggctc	tgtcttgcct	tgacaccttc	cttnagtcaa	gncgncgaat	480
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cangggntac	catagngtct	gcgngtccct	gaagaatcct	tttngccaan	cgggcgaatn	600
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SEQ ID NO: 129

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cggcatgggt	ctgtctgagt	gcctcctcct	gactgctatg	gcntacgacc	gatatgcngc	240
catctccagc	ccccttctcn	ccccactat	catgaccag	ggcctctgta	cacgcatgga	300
ggtngcgccn	tatgntngtt	gncnctntng	agctccctga	nccannnctn	ntcacntatt	360
ntaggtcna	ccnntcgngc	tcccgntcca	ncancnaacc	ccnttcgctc	ctgnaactt	420
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cncctganct	gcnntttctt	ccangcngc	ncgncancc	cgntctntct	gnngaancct	540
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nttcnctgtc cganntcctc anacnctcc ctanncg 697

SEQ ID NO: 130

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gagccagtgt gtcattgtgg tggctgggtc ctgggtcctc gcttgtgcgt gtgctctttt 360
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SEQ ID NO: 131

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gaaggaataa atcatcgggt tgcggaagga ataaatacat cgggttgcg aggaataaaa 240
tacatcgggt tgcgtaagga ataaatcatt gggttgcgta aggaataaat cattgggttg 300
cgtaaggat aaatcattgg gttgcgtaag gaataaatca ttgngttgcg taaggaataa 360
atctttgtgc tggtagcat ctatcatggg gttacgaaag ggaagaaata cattggaang 420
ggcgaattcc agcacactgc cgnccgctac tagtgggatc cganctcggg accaagcttt 480
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gaccnagctt gnttctcttg cgtnaanttt cnttattcct cctntntntc ttctccccc 600
ncanaatnnt nccccngntn ancacncann ttntatannc ctngngctcc cctantc 657

SEQ ID NO: 132

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actactgtga cataccaccc cttctccacc tggcttgtgc caacacagcc acagcaagag 480
ngnccctcna tgncttttct gntctggcac ccttctggcn gctgcaggca ttctcacctc 540
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ggactcccca cttntgcctc ccnn 624

SEQ ID NO: 133

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cagaagagg tgaccacagt gagatgggag gacaggtcc naaaggcctt tctccatgct 180
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gctgagaggc acaaccacga agatgacact ggacacangc caactgtatc cattgttaga 300
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canaccatt atctcangcc acatgtatnt cagcctttta ntncnntnt nagtntagtc 480
tngntgntnt ncnnnattnn ccnntctttn tccntcann tatcattntc attccttncn 540
ncncanantt atggnnccnc cgnacnct cngtnactcc cctnnngncg 590

SEQ ID NO: 134

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tgatctctct	tgcttttccc	cacacactgc	aacctctgcc	tccacattca	agtgattctc	180
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agatgttttt	gaaacaaccc	ccaccagcac	tggagggagt	caaggggaaga	caagccaggc	300
atctgagctc	ctctgtctct	gcctttcctt	ctcactgtcc	ccagggtaac	ccgtcaccac	360
ccccatcacg	aaccttcca	tctacacatt	acgtaacaag	ggcgaattcc	agcacactgg	420
cgcccggttac	tagtggatcc	gagctcggtta	ccaagcttga	tgcatagctt	gagtattcta	480
acgntcacc	taaatagctt	ggcgtnatca	tngncccnag	cttgntttct	gtgtgaaatt	540
tgntatccgc	tcacaaatc	cacacaacat	acgagccnga	agcaataagn	nntaaagcct	600
gnggtgccna	angagnagc	taactcacia	ttaattncgt	tggctnactt	gcccc	655

SEQ ID NO: 135

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cagcagtgcc	caaagcaccg	gccatcctac	tggggagaag	tcagaccata	tcattttacaa	180
gctgtctttt	gcagatgtac	tttgttttct	cattaggctg	cacagagtac	ttcctcctgg	240
cagccatggc	ttatgaccgc	tgtcttgcca	tctgctatcc	ttacactac	ggagccatca	300
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ccntttntcn	nctatgnngt	acantcatta	agncccaatc	nctcatggga	tccccctttg	600
cnagtggccc	ggcgngcnaa	ngncctnctc	cccgtncn			639

SEQ ID NO: 136

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tnctctcnct	ccnctcacc	ngntngtcta	gtctgcccgc	gccccntcgc	tatcnctncc	600
ccccctctcg	cntccccga	togtctnngt	ctaccctcnc	catctnatcc	ctcc	654

SEQ ID NO: 137

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gccccaaagca	ctggccatcc	cactggggag	aagtcagacc	atatcattta	caagctgtct	180
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nacacttgta	cctcncgnt	tgccctnnnc	tgtcttctaa	tccctnngtt	gtantnctn	480
gccttntctc	cccttcgctn	gttnatcttn	anntnctgc	ntctntgncc	ctctccttcg	540
ttngacccct	ntannncnc	tcttctctnn	anntccctc	tatcncccg	ntnnccctcn	600
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SEQ ID NO: 138

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cagtgcccaa agcactggcc atcctactgg ggagaagtca gaccatatca ttacaagct 180
gtcttttgca gatgtacttt gttttctcat taggctgcac agagtacttc ctctggcag 240
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nnngtcnncc
670

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SEQ ID NO: 139

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agatgtactt tgttttctca ttaggctgca cagagtactt cctcttgga gccatggctt 240
atgaccgctg cttgccatct gctatccttt acactacgga gccatcatga gtagcctgct 300
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atngtacccc tgnanttgcc ctggccttgt anccancaca tangetcgta tngcttctn 480
ntggccnccn tgnctcgnt ngtnnccng ntanccngnc tnnacgtcct ttcnnacact 540
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635

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SEQ ID NO: 140

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cagcagtgcc caaagcactg ggccatccta ctggggagaa gtcagacat atcatttaca 180
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gcagccatgg cttatgaccg ctgtcttgcc atctgctatc ctttacacta cggagccatc 300
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tcaacccaen tttctttttg nggatattgg caaccccntg gnatttgnc cctnggccct 480
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cnttctatg ggngnnccct tnnattcnag caccacancc ttangggaac ccncctttt 660
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709

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SEQ ID NO: 141

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gagtgcctg ctctcagcgc agctggccct gggctcctgg gtctgtggt tcgtggccat 360
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nntcnntnc g 671

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SEQ ID NO: 142

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SEQ ID NO: 143

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caccacagac aggtgggagc cacaagtaga gaaggccttg cagataccct tagaagaagg 240
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gacaagaatg agccctccca tgataaatat caccattca ttaactcgag tgcagagaa 360
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ctttnaataa c 611

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SEQ ID NO: 144

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aagagggtga ccacagtga atgggaggag caggccccaa aggctttct ccatgctgtg 240
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agaggcaca ccacngaaga tgacactgta cacagccaac tgtattttat tgnaggngn 360
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tacntccct cntccctnt nttttcttc cncctnctc ttcttttnc cntntccnt 540
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SEQ ID NO: 145

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SEQ ID NO: 146

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SEQ ID NO: 147

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cnatcttaca	gggtggcat	catctnangg	ggngnntgca	tccttnncta	nntnncnagg	540
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ccttcttcgt	aacctncc					618

SEQ ID NO: 148

cntagatgca	ngctcgagcg	ggcgccagcg	tgnngnanat	ctgcagaatt	cgccttcca	60
atgtattttt	tctactaac	ttgtctttcc	tagatctctg	cttcaccacc	agttctatcc	120
cccagctgct	tttcaatcta	ggcagcccg	gcaagactat	cagccacacg	ggctgtgcca	180
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tgctcctgn	gactatgaag	cttgtcacga	tgcggaagat	gtaagnttgc	ancntnccn	420
ttntngnat	gccngcntcn	tataaaaanc	annctggcg	ggtcacagt	cttngnata	480
gcattngtc	nccttnatnn	catcnnattt	gcctngngt	ccctcgttcc	cantntncan	540
tcnttctng	gcttancntt	ctncaccngn	ncttncntan	ctactcctn	ttnttctntc	600
cttctanctc	tnctctttc	ttnccttcca	tcc			633

SEQ ID NO: 149

gatgatgctc	cgagcgccg	ccagtgtgat	ggatatctgc	agaattcgcc	cttggtccta	60
agactataca	tgaatgggtt	tagcatcggt	ttgaaagaac	tgtaaaatag	aaaaaggacc	120
ttctgctgct	cctcaggatg	gcgggactta	ggggccatgt	acatgacgat	ggcgtgcca	180
aagaagagtc	ccactacgca	gaggtgggag	gagcaggtgg	agaaggcctt	tctgcggccc	240
tcccagact	ggatcctcag	gatggccg	aggatgtgtg	agtaggagac	cagcaccagg	300

cagagtgggtc	ccaccaggat	gaacatgcag	gctgcaaaga	tgaccacctg	gttgagccag	360
gtatcagcac	agggcagcct	gaggacagac	aggatttcac	aagaagaagt	ggttgatttc	420
acgaggccca	canaaagggc	agtcttagga	tgaggntcac	atggaccata	gccaggaggg	480
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ngnnttattc	ggagagnntg	nnagaconggt	cancgttccc	gntcgttagga	caattancac	600
ccancnggng	ccttcantna	tgtc				624

SEQ ID NO: 150

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agatgctggg	caacctctgg	ggcccaaaga	agaccatcag	cttcctggga	tgctctgtcc	180
agctcttcat	cttcctgtcc	ctggggacca	ctgagtgcac	cctcctgaca	gtgatggcct	240
ttgaccgata	cgtggctgtc	tgccagcccc	tccactatgc	caccatcatc	cacccccgcc	300
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aggtcccatc	tctgattcga	ctctcctgng	gagatacctc	ctacaatgaa	atccagttgn	480
ctgtgtccag	tgatcatctt	ggtggntgtg	cctctcagcc	tcctccttgc	ctcttatgga	540
gccactgccc	aggcnggggc	tgaggattaa	ctttgcccna	gccatggaag	aaaggtcttt	600
nggacctngn	n					611

SEQ ID NO: 151

gatgcatgct	cgagcgcccg	ccagtgtgat	ggatatctgc	agaattcgcc	ctttctttat	60
ttcgaagagt	atacactagt	ggattgaaga	gaaacaaata	cataggaagg	gcgaattcca	120
gcacactggc	ggccgttact	agtggatccg	agctcggtag	caagcttgat	gcatagcttg	180
agtattctaa	cgcgtcacct	aaatagcttg	gcgtaatcat	ggtcatagct	gtttcctgtg	240
tgaaattggt	atccgctcac	aattccacac	aacatacgag	ccggaagcat	aaagtgtaaa	300
gcctgggggtg	cctaattgagt	gagctaactc	acattaattg	cgttgccgctc	actgtccgct	360
ttccagtcgg	gaaacctgtc	gtgccagctg	cattaatgaa	tcggccaacg	cgcgngnaga	420
ggccggnttg	cgtattgggc	gctcttcgcg	ttctcgctca	ctgactcgct	gcgctcggga	480
cgtccggctg	cggcgagcgg	tatcagctta	ctcaanggcc	gtantacggt	tattcncagg	540
aatnnggggt	taacgccngg	naaagaacat	tgtgngccan	angncaagcn	taatgccag	600
gaaccgntan	aacgntccc					619

SEQ ID NO: 152

ctcgagcggc	gcagtgtgat	ggatatctgc	agaattcgcc	cttcctatgt	attattttctc	60
cataattttat	ctattgccga	tatctgcttc	tcttccatca	cagcgcccaa	ggttctggcg	120
gaccttctgt	ctgaaagana	gacctctcc	ttcaatcatt	gtccactca	gatgtttcta	180
ttccacctta	ttggaggggc	ggntgtatnt	nnccntgtt	ncccnatgcg	cctncttttc	240
ccntntcntt	tcnanccttt	ncgcctcctc	tcatgcnnnc	ccttcctctc	tattctntgtc	300
gnaatacgct	ntctccgnct	nctgtctgct	catccttget	gttnctntn	canctcatcg	360
ctgtctgtcg	tacctnttnc	ntnctgtgtc	tgcgngntca	tncacnntct	caancgtctn	420
ccctcaactnc	tcttntcntg	ctcttctntn	cncctgtctc	tancttcttg	ccctgntacg	480
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actntctnt	ctatatccgc	tcttaccgct	ctcnnnnan	cacncttnc	tctgcataac	660
agntnttctc	ncacncncat	nttcttcccta	cncctctcnc	tgtcncacag	atctntcnc	720
nctctgctct	cgttgntccc	cctgncactn	cgcaatcnca	catatncgtc	tctctcncnt	780
cgccacttat	ntngcanctt	tctctgcgtt	nctctncgat	ntccctccnc	nttctcncnn	840
ctnatnatcg	nttattcnaa	tcatactcgg	tactgtttct	gtnccttnt	cntgncnct	900
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SEQUENCE LISTING

<110> DigiScents; Yeda Research
Bellenson, Joel; Smith, Dexter; Lancet, Doron; Glusman, Gustavo;
Fuchs, Tania; Yanai, Itai

<120> OLFACTORY RECEPTOR SEQUENCES

<130> 422852000200

<140> 06/158,615

<141> 1999-10-08

<160> 2747

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 613

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 8, 11, 17, 28-29, 34, 40, 48, 67, 71, 613

<223> N can be any nucleotide

<400> 1

ggnnttatncc	ncgttgnact	gcaggggnnc	aacncacagn	acgcccgnctg	ctgaggctat	60
aaatgancgg	nttaaggaga	ggagtgaaga	cagtaaaaaa	acacagagat	aaatttatca	120
attgggaagc	tttcaaaggg	ccaaataagc	atgaatatta	atgggccaaa	gaagagaagc	180
acaacagtaa	tgtgggcaga	cagagtggga	agggccttgg	acatcccatc	agaggcttgg	240
cgatgcacag	tagcaaggat	gatagtgtca	gaaatgagca	aaaggaggaa	acacataagt	300
gagagcagac	cactgttagt	gagcaccagt	atctcaaaac	catagggtgtc	taagcaggca	360
agcttgatca	ctaggaggag	gtcacagaaa	aaattgtcta	ccctgttggg	tccacagaaa	420
ggcagattga	ctttgaatgc	caggtgggtg	gctgagtgtg	agatgccaat	ggcccaggaa	480
acccccacca	gaacagttca	caccctccgg	ttcatgatgg	ttatgtagtg	cagagggttg	540
catatagcaa	tgtatctatc	ataggccatg	gcaacaagaa	gcaccatctc	actacccccca	600
aaaacatgca	agn					613

<210> 2

<211> 578

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 4, 6, 8

<223> N can be any nucleotide

<400> 2

ggnntntnac	acggactcca	agcagtggta	acaacgcaga	gtacgcccgt	tcctgagtga	60
gtagatgaag	gggttcagca	tgggattgat	gacagtgttg	aaaattccaa	cagctttatc	120
cttgtctgaa	agcttggttg	aaccagtcg	catatagtta	aagataacctg	aaccatagaa	180
tatggcaacc	acagtgaagt	gggagccaca	tgtggagaag	gctttcttcc	tgccctctac	240
agagcgaatt	cgcaggactg	cagctgccac	gtggatatag	gagatgacaa	tgagagccat	300
gggggtacct	gccattataa	aaccacagc	aaaaagcagc	agctcattga	gttgggtgct	360
ggagcaggag	agctggaaga	gctgtgggag	gtcacagtag	aagtgattga	tcacattggg	420
gccacagaag	ttgagcgtgg	acatggccac	agtgtgggtc	agtgcgttgg	tgaaagcaca	480
agcccaggac	gcagccacca	acatcctctg	gactgtctga	ctcatgcggg	tgcttgtagg	540
tgagggggccc	ggcagatggg	caggaatcgg	tcataggg			578

<210> 3
 <211> 588
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 4, 5, 13, 16, 27, 576, 578, 588
 <223> N can be any nucleotide

<400> 3
 tggnttttta tcnccnttgg agctccnaag cagtggtaac aacgcagagt acgcccgttg 60
 cgaagcgtgt agattagggg gttcagtagg ggagtgatga cagtgtagggt caccgagatc 120
 agctgggtcat gttctctggt gttctctgac ttgggcttga ggtaggcaat ggaggcacag 180
 ctgtagtgga caatgaccac agtgagggtg gatgcacagg tggcaaaagc cttcttccgg 240
 ccctcaactg aagtaatctt gaggattgta gagataatga gaacataaga aatgaaaacc 300
 agacccatag gtacaacaag caccagcaca ctgataatca aagtcaggat ttcattgaca 360
 gtgggtgtcaa tgcaggagag cttcatcaca gggcggtatgt cacagaagaa gtggggcacc 420
 ttttctagca cagaagggtta acctgaatac agatgtcact tgcgttattg ctacaatcag 480
 cccaatgctg caaggccccc aggacaagtt ggatacgcag cctcttggtc ataataacca 540
 tgtatctcaa ggggggttgca agatggccac atagcngntc atattccn 588

<210> 4
 <211> 583
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3, 7, 13, 437, 485, 488, 506, 521, 524, 545, 558
 <223> N can be any nucleotide

<400> 4
 gtngtnttta acnccattgg agctccaaag cagtggtaac aacgcagagt acgcccccaa 60
 tgtatttttt tttgagaaac ttgtctttct tagatttttg ttacatctct gtcacaattc 120
 caaaatctat tgtttagttcc ttgactcatg atacttccat ttctttcttt ggggtgtgctc 180
 tgcaagcctt ctttttcatg gacttggtcaa ctacggaggt agccatcctt acagtgatgt 240
 cctgtgaccg ctatatggcc atctgccggc ctttacatta tgaggtcac ataaaccaag 300
 gtgtctgtct gaggatgatg gccatgtcgt ggctcagtg ggtgatctgt ggattcatgc 360
 atgtgatagc aacattctca ttaccattct gtgggcgcaa tagaatacgt caatttttct 420
 gtaatatcc acaactncta agcctcttag accccaaagt aattaccatt gagattggag 480
 tcatnggntt ttggtacaag tcttnggata atcctctttg ntgnaattac tctctctac 540
 atgtncattt ttttttgnca tcatgaggga ttccttctaa agg 583

<210> 5
 <211> 584
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2, 5, 8-9, 11, 14, 17, 550, 557-559, 561, 576, 582
 <223> N can be any nucleotide

<400> 5
 gnggnttntt nccnccnttg gactccaaag cagtggtaac aacgcagagt acgcccgtgt 60
 gtaaatgaat ggggttcaaca tgggagtcac aacagtgtag gacaatgata gcagcttcgt 120
 gccctcaggt gaattatttg atttaggccg gaagtagggt aggcttaatg atatataga 180
 aagagagaca acaaggaggt gtgaggaaca tgtagaaaag gctttattct tccctttagc 240
 tgatgggatc ttgaggatgg cagcagcaat gcgagtatag gaacacaaga tcagcaagca 300

ggggatcatg	accaccagaa	tggttccgac	gatggcgtag	atctcaaaca	gtgctgtgtc	360
tgcacagacc	agcctcagca	caggtggggt	gtcacagaag	aagtgggttc	ccttggttgt	420
gccacagaat	ggaaaactga	agagccatgt	ggctctgcaca	gtagctacag	gaaagcctgg	480
gaaccaggag	gcagcagcca	gtttggcacg	agtccttttg	ttcatgatga	ctgggtagtg	540
caagggactn	gcagatnnnc	ncattcggtc	atatgncatg	gnag		584

<210> 6

<211> 572

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2

<223> N can be any nucleotide

<400> 6

cnttggagct	ccaaagcagt	ggtaacaacg	cagagtacgc	ccgctccgca	gagaatagat	60
gaaaggggtc	agggctcggt	gcacgactgt	gtagaacgca	gacaggaaaa	catccagaac	120
ggggggagaa	tttgaaattg	gcttcacata	ggcaatgctg	ccagatatca	taaagagtgt	180
tacaaccaca	agatgtggaa	tgccaggtaga	aaatgttttt	gatctaccct	ccttagaagg	240
aatcctcatg	atgacagaaa	aaatgtacat	gtaggagaga	gtaattacaa	caaaggagat	300
tatcacaaga	cttgtacca	aaaccatgac	tccaatctca	atggtaatta	ctttggggtc	360
taagaggctt	aggagtgtgt	ggaatattac	agaaaaattg	acgtattcta	ttgcgcccac	420
agaatggtaa	tgagaatgtt	gctatcacat	gcatgaatcc	acagatcacc	ccactgagcc	480
acgacatggc	catcctctc	agacagacac	cttggtttat	gatgacctca	taatgtaaag	540
gccggcagga	tggccatata	gcgggtcatag	ga			572

<210> 7

<211> 549

<212> DNA

<213> Homo Sapien

<400> 7

gcagtggtaa	caacgcagag	taccgcccc	tatgtacttt	ttcttgggaa	acttgtctgt	60
gtttgacatg	ggtttctcct	cagtgaactg	tcccaaaatg	ctgctctacc	ttatggggct	120
gggccgactc	atctcttaca	aagactgtgt	ctgccagctt	ttcttcttcc	atttctctcg	180
gagcatttag	tgcttcttgt	ttacgggtgat	ggcctatgac	cgcttctactg	ccatctgtta	240
tcctctgcga	tacacagtca	tcatgaacct	aaggatctgt	gtggccctgg	ctgtgggcac	300
atggctgtta	gggtgcattc	attccagtat	cttgacctcc	ctcaccttca	ccttgccaca	360
ctgtgggtccc	aatgaagtgg	atcacttctt	ctgtgacatt	ccagcactgt	tgcccttggc	420
ctgtgctgac	acatccttag	cccagagggt	gagcttcacc	aacgttggcc	tcatatctct	480
ggctgctttc	tgctaaatct	tttatcctac	actagaatca	caaatatcta	tcttaagcat	540
tcgtacaac						549

<210> 8

<211> 548

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 537, 542

<223> N can be any nucleotide

<400> 8

ggaacaacgc	agagtgcgcc	ccgatgtact	tgttcttctc	caacctgtcc	tttgctgaca	60
tttgtgttac	ttccaccacc	attccaaaaa	tgctgatgaa	catccagaca	cagaacaaag	120
tcatcaccta	catagcctgc	ctcatgcaga	tgtatttttt	catactcttt	gctggatttg	180
aaaacttcct	cctgtccgtg	atggcctatg	accggtttgt	ggccatctgt	cacccctgc	240
actacatggg	cattatgaac	cctcacctct	gtggactgct	ggttctggca	tcctggacca	300

tgagtgtctct	gtattccttg	ctacaaatct	taatggtagt	acgactgtcc	ttctgcacag	360
ccttagaaat	ccccacttt	ttctgtgaac	ttaatcaggt	catccaactt	gcttggtctg	420
atagctttct	taatcacatg	gtgatatatt	ttacagtttg	cgctgctggg	tggagggtccc	480
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gntcaggg						548

<210> 9
 <211> 583
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 8, 13, 14, 16, 25, 232, 271, 305, 438, 488, 497, 500, 505, 512, 524, 544, 558, 578
 <223> N can be any nucleotide

<400> 9	
gggttttnac	ccnntnggag ctcnagcag tggtaacaac gcagagtacg cccgtttcgt 60
aggctataaa	tgaaggggtt gagtgagggg gtcaccactc catagaagag ggccatgaac 120
ttgggttgat	cccttgagat ggaggagggg ggctgaaggt acatgctgat ggctgggcca 180
taaaataaga	aaactacaat aagatgggag gagcatgtcc caaaggcctt tntccttccc 240
ttggaagatt	tgatcttaaa tacagcactt ncaatactag cataggaagc aagaattaag 300
catantggga	cagctaacat aaaaatgcat accacagaga gtgtgagctc gttagaacct 360
ttttcaccac	aggcaatctt tatcagaaca ggaatctcac acaccaagtg gtccagctta 420
ttgagaccac	acagtggnaa tttgtattgt ggcagtggcc ctctgagaac ggcatagatt 480
ataccaantt	aaccacnacn gcggnaacta angattcaga cgcnctggat tcatgatgag 540
ggtntagtga	agaggttntc agaattggcca cataccgntc aaa 583

<210> 10
 <211> 569
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 7, 28, 174, 232, 237, 314, 341, 445, 447, 449, 470, 494, 497, 503, 510, 515, 527, 553, 554, 569
 <223> N can be any nucleotide

<400> 10	
gctgctncca	gcagtggtaa caacgcanag tacgccccca atgtatttgt tcttcggcca 60
tctgtctctc	ctggatgtct gcttcacac cactaccatc ccacagatgt tgatccacct 120
cgtggtcagg	gaccacattg tctcctttgt atgttgcatg acccagatgt actntgtctt 180
ctgtgttggt	gtggccgaga gcatectctt ggctttcatg gcctatgacc gntatgntgc 240
tatctgctac	ccacttaact atgtcccgat cataagccat aaggctctgt tcaggcttgt 300
gggaactgcc	tggntctttg ggctgatcaa tggcatcttt ntcgggtata tttcattcct 360
agagcccttc	cgcagagaca accacataga aagcttcttc tgcgaggccc ccatagtgat 420
ttggcctctt	ttgtggggga ccctnanant agtctgtggg caaatctttt gccgatgcca 480
tcgtggtaat	tctnagnccc atnggtgctn actgntactt acctatntgc acattcctgt 540
ccaccatcct	agnnaaagtc ctccttctn 569

<210> 11
 <211> 582
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-4, 12, 14, 504, 513, 522
 <223> N can be any nucleotide

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<400> 11
ggnnnttttac cncnattgga gctccaaagc agtggtaaca acgcagagta cgccccctat      60
gtacttggttc ttgagaaact tgtctttctt agatttttgt tacatctctg tcacaattcc      120
aaaatctatt gttagttcct tgactcatga tacttccatt tctttctttg ggtgtgctct      180
gcaagccttc tttttcatgg acttggcaac tacggaggta gccatcctta cagtgatgtc      240
ctatgaccgc tatatggcca tctgccggcc ttacattat gaggtcatca taagccaagg      300
tgtctgtctg aggatgatgg ccatgtcgtg gctcagtggg gtgatctgtg gattcatgca      360
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taatattcca cagctcctaa gcctcttaga ccccaaagta attaccattg agattggagt      480
catggttttt ggtacaaggc ttgngataat ctncctttgg gnaattactc tctcctacat      540
gtacattttt tctgcatcat gaggattcct tctaaggagg gg                        582

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<210> 12

<211> 579

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 384, 528, 572, 578

<223> N can be any nucleotide

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<400> 12
ggntttgacc acggagctcc aagcagtggg aacaacgcag agtacgccct cttgtcctcg      60
tgccgataca tgatgggggt caacatggga gtcataacag tgtaggacaa tgatagcagc      120
ttcttgccct cagggtgaatt atttgattta ggccggaagt aggtgaggct taatgatata      180
tagaaaagag agacaacaag gaggtgtgag gaacatgtag aaaaggcttt attcttcctt      240
ttagctgatg ggatcttgag gatggcagca gcaatgtgag tataggaaca caagatcagc      300
aagcagggga tcatgaccac cagaatgggt cgcagcatgg cgtagatctc aaagagtgtc      360
gtgtctgcac agaccgcct cagnacaggt gggctgtcac agaagaagtg gttcaccttg      420
ttggtgccac agaattggaaa actgaagagc catgtggctc gcacagttagc tacaggaaag      480
cctgggaacc aggaggtagc agccagtttg cacgagtccc tttggttnat gaatgactgg      540
ggtagtgcaa gggactgcag atggccacat ancggctc

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<210> 13

<211> 577

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 7-10

<223> N can be any nucleotide

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<400> 13
gmnnttnnnn ccactggagc tccaaagcag tggttaacaac gcagagtacg cccccaatgt      60
atttattctt gctcacctct ccttagttga tatctgtttt accaccagta ttgtcccca      120
gctgtgtggt aacctaaaag gacctgacaa aacaatcaca ttcttggtt gtgtcatcca      180
gctctacatc tccctggcat tgggtccac tgagtgtgtc ctctggctg taatggcttt      240
tgatcgctat gctgcagttt gcaaacctct ccactatacc gccgtaatga accctcagct      300
gtgccaggct ctggcagggg ttgcgtggct gagtggagtg ggaaacactc ttatccaggg      360
cactgtcacc ctctggcttc ctgcgtgtgg acaccgattg cactaacatt tcttcgtgag      420
gtaccctcca tgattaagct tgcattgtgt gacatccatg ataatgaggt tcagctcttt      480
gttgcctcac tggctcttgc cctcttgccc ttagtgctaa tactgtgtgc tatggacata      540
tagccaaggt ggcataagga tcaagttagt ccagcct

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<210> 14

<211> 577

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-4, 6, 8, 252, 375, 474, 506, 515, 532, 541, 545-546, 556, 562, 573

<223> N can be any nucleotide

<400> 14

ggnnntntnac	tccatggact	ccaagcagtg	gtaacaacgc	agagtacgcc	catacatgat	60
gggggttcagt	aggggagtg	tgacagtgt	ggtcaccgag	atcagctggt	catgttctct	120
ggtgttctct	gacttgggct	tgaggtaggc	aatggaggca	cagctgtagt	ggacaatgac	180
cacagtggag	tgggatgcac	aggtggcaaa	agccttcttc	cggccctcaa	ctgaagcaat	240
cttgaggatt	gnagagataa	tgagaacata	agaaatgaaa	accagaccga	taggtacaac	300
aagcaccagc	acactgataa	tcaaagtcag	gatttcattg	acagtgggtg	caatgcagga	360
gagcttcatc	acagngcgga	tgtcacagaa	gaagtggggc	acctttctag	cacagaaggg	420
taacctgaat	acagatgtca	cttgcggttat	tgctacaatc	agcccaatgc	tgcnngcccc	480
caggacaagt	tggatacgca	gccttntcgt	tctantaacc	atgtatctca	angggcttgc	540
ngatnnccac	atactngcat	anaccattgc	tgngagc			577

<210> 15

<211> 583

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 5, 7, 13, 427, 485, 488, 532, 559, 569, 574, 583

<223> N can be any nucleotide

<400> 15

gncgntntta	acnccattgg	agctccaaag	cagtggtaac	aacgcagagt	acgcccatta	60
cgaaaagtgt	agatgaagg	gttcaagagg	ggtgtgatga	tgcagctcag	gacggaggca	120
cctttgttga	gcagtttgga	ctgagcctct	gacatacgaa	tgtagagaaa	gatgggaactg	180
ccatagatga	tgaccaccac	tgtaagatgc	gagggcgcaag	tggaacacgc	tttccttcgc	240
tcagcagctg	tagggggcct	gagaacagtg	gcaagaatgc	aggcatagga	aactgaggtc	300
agagccagtg	agcccagtaa	caccaacgta	gagagcatga	aagccaccag	tttcagcagg	360
tggggtgtccc	cacaagaaag	cctgagcaag	ggccaactgt	cacgaaagaa	gtgggtcaata	420
ccattgnggc	cacagaaagg	catggctggc	catgaggaca	gtggggcaaa	ggaccagag	480
gaatncanct	agccaggagg	ccacactagt	ttgtgaacag	acatggccat	tnattagggt	540
ctcatagcgg	agttgtcgnc	agatttgcnt	ggtnacgatt	can		583

<210> 16

<211> 577

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3-4, 12, 14, 549

<223> N can be any nucleotide

<400> 16

ggnnnttttac	cncnattgga	ctccaaagca	gtggtaacaa	cgcagagtac	gccccctatg	60
tattttattct	tgctcacctc	tccttagttg	atatctgttt	taccaccagt	attgtccccc	120
agctgctgtg	gaacctaaaa	ggacctgaca	aaacaatcac	attcctgggt	tgtgtcatcc	180
agctctacat	ctccctggca	ttgggctcca	ctgagtgtgt	cctcctggct	gtaatggctt	240
ttgatcgctg	tgctgcagtt	tgcaaacctc	tccactatac	cgcctgaatg	aacctcagc	300
tgtgccaggc	tctggcaggg	gttgcgtggc	tgagtggagt	gggaaacact	cttatccagg	360
gcactgtcac	cctctggctt	ccccgctgtg	gacaccgatt	gctccaacat	ttcttcgtga	420
ggtaccctcc	atgattaagc	ttgcatgtgt	ggacatccat	gataatgagg	ttcagctctt	480

tggtgcttca ctgggtcttgc tctctcttgc cttagtgtcta atactgctgc ctatggacat 540
 atagccaang tggcataaag gatcaagtca gtccagg 577

<210> 17
 <211> 621
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 8, 13, 618
 <223> N can be any nucleotide

<400> 17
 gnnnnttntt cantccattg ggccctctag atgcatgtct gagcgccgc cagtgtgatg 60
 gatatctgca gaattcgccc ttattccgga gggatacat gaagggattg gtaactagac 120
 gtaaactcga agccaagaac agaatttctc ttagaaaaga gaattgaaac taaagagaaa 180
 gaactagcaa agaaggaaat attgaatata caagagagag gagacagatg atggaacaag 240
 actctgaaag aggtggaagg gattgaatac aatcaaaagt atgggtgactg ctagttccaa 300
 gatggtggcg taggggcaag ctggctttgc ttacccccct ggcagaaaac caaaaacaaa 360
 tagcaccaag attatcacta gcaatatccc agaactcaca tataaggatg agacagttcc 420
 cagggccccag agaagatcag aagcacaaagt gggagaagtc agctttggat gctactttgt 480
 tctaaggagg acaagttggg aggatgtatt cagatgtata ttcaatgtta taaaacagcc 540
 cataaaacaa agattggaaa atgttgaatt ttgcaaccag gagcaaatac tgggaaaggc 600
 gaattccagc cacttgcneg c 621

<210> 18
 <211> 615
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 8, 10, 14, 21, 583
 <223> N can be any nucleotide

<400> 18
 gnnnnttnan tcantgccct ngggccctct agatgcatgc tcgagcggcc gccagtgtga 60
 tggatatctg cagaattcgc cettgttgcg caaggtgtaa atgaaaggt ttgcgcagga 120
 gtaaatgaag ggattacgca ggagtaaagt aagggattac gcaggagtaa atgaaggat 180
 tacgcaggag taaatgaagg gattacgcag gagttaaata agggattacg caggagtaaa 240
 tgaagggtatt acgcaggagt aaatgaaggg attacgcagg agtaaataaa gggattacgc 300
 aggagtaaat gaagggatta cgcaggagta aatgaaggga ttacgcagga gtaaatgaag 360
 ggattacgca ggagcaaata cataggaagg gcgaattcca gcacactggc ggccgttact 420
 agtggatccg agctcggtac caagcttgat gcatagcttg agtattctaa cgcgctcacct 480
 aaatagcttg gcgtaatcat ggcatagct gtttcctgtg tgaaattggt atccgctcac 540
 aattccacac aacatacgag cccggaagca taaagtgtaa agnctggggt gcctaataag 600
 tgacttactc catta 615

<210> 19
 <211> 696
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 5, 7, 287, 300, 309, 313, 328, 331, 343, 345, 347, 360, 366,
 386, 388, 391, 394, 401, 407, 416, 420, 428, 432, 434, 437, 441,
 443, 448, 450, 452, 457-458, 463, 476, 484-485, 493, 503, 506, 514,
 518, 520, 524, 528, 540, 541, 548, 550, 553-554, 557, 561-562,

566-568, 571-572, 575, 582, 584-585, 587-588, 603, 607, 614,
620,
623, 627, 629, 641, 648, 652, 661-662, 665-666, 668, 672, 675, 678,
684, 695

<223> N can be any nucleotide

<400> 19

gmnantnatt	ccatccattg	tcccttcaga	tgcattgctcg	agcgggccc	agtgtgatgg	60
atatctgcag	aattcgccct	tcttggtttt	tgtgctgata	gatcatggga	ttcagcatgg	120
gggtgaccac	agtgtacatc	actgaggctg	ttgcacttga	gtgtgagttg	cggtggcag	180
cagaactaag	gtacaccct	aggattgcac	cataaaataa	ggagacaact	gagaggtgag	240
atgcacaggt	ggaagatgcc	ttgtacttcc	cctgagctga	tgagatngca	tgtatggaan	300
gaaattatnt	tanaagtaag	agtaaagnat	nccagtcagg	ggnancnttc	acccatcagn	360
tgcaanttgt	aaaaattata	ttcaancnat	ntgnatttaa	ngaaaancct	tatcangtan	420
acactgcnaa	gntntgnatt	nanccctngn	anttaanntt	tcnacaagaa	aataangtgc	480
gttnnaatct	ttntaagtc	ctntcnccat	taangtcnan	tcntccnta	tccttttctn	540
nattttgnan	tcnngantac	nntctnnngc	nntcnatttc	tntnntnnet	gacctactaa	600
ccnattnagt	tacnacaagn	ccnttcnant	ctctataatt	nctcgcangt	tntccctctt	660
nncanntncc	cnttnttntc	cctnttcccc	atctnc			696

<210> 20

<211> 615

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 495, 545, 582, 600

<223> N can be any nucleotide

<400> 20

ccattggccc	tctagatgca	tgtctgagcg	gccgccagtg	tgatggatat	ctgcagaatt	60
cgcccttcc	atgtattttc	tcttactggg	ctttctggt	tctcaaactc	ttcagctctc	120
tctctttatg	ctttttctgg	tgatgtacat	cctcacagtt	agtggtaatg	tggctatctt	180
gatgttggtg	agcacctccc	atcagttgca	taccccatg	tacttctttc	tgagcaacct	240
ctccttctcg	gagatttggt	ataccacagc	agcagtgcc	aaagcactgg	ccatcctact	300
ggagagaagt	cagaccatat	catttacaag	ctgtcttttg	cagatgtact	ttgttttctc	360
attaggctgc	acagagtact	tcctcctggc	agccatggct	tatgaccgct	gtcttgccat	420
ctgctatcct	ttacactacg	gagccatcat	gagtagcctg	ctctcagcgc	aactggcctt	480
gggcttctgg	gtggntgggt	tcgggggcaa	tgcatgcccc	acaggccttc	aatcaagtgg	540
gctgntcctt	ctgggtggcc	ccggtgccaa	tcaaccactt	tntttttggg	acaattgcan	600
ccctggaatt	ggccc					615

<210> 21

<211> 745

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-3, 8, 21, 23, 26, 33, 43, 116, 201, 212, 222, 239, 252, 279, 282,
288, 292-293, 308, 320, 325, 328-330, 333-334, 339-341, 344, 354, 360, 365,
372, 377, 382-383, 388, 390, 394, 397, 402, 415, 418, 422, 424-425, 427, 431,
436, 441, 445, 450, 451, 457, 466, 493, 495, 498, 501, 508-509, 513, 515,
517-518, 520-523, 525, 528-529, 535, 538, 540-542, 544-546, 548-550, 553,
555, 565, 584, 586, 592-593, 607-608, 615, 617, 619, 621, 634, 636-637, 644-
645, 651, 656, 662, 671, 685, 693, 697, 699, 710, 714, 735, 737, 740, 745

<223> N can be any nucleotide

<400> 21

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gnncttantt caatcccacc nanccntgcc gangcatgct cgngcggccg ccagtgtgat      60
ggatatctgc agaattcgcc cttecatgtt atttactctt actgggcttt cctggntctc     120
aaactcttca gctctctctc tttatgcttt ttctgggtgat gtacatcctc acagtttagtg    180
gtaatgtggc tatcttgatg ntgggtgagca cntcccatca gntgcatacc cccatgttnt    240
tctttctgag cnacctctcc ttctgggaga tttgggtatnc cncaagcngc anngcccaaa    300
gctttgcnca tcttattgcn cagangcnnn ccnntacann nacnctcctg tttntcgtcn     360
ccttnctctt tcttctnctc anntactnctn tctnctntag tntctttctt ctctntcnct    420
cntnnncctt ntaatnttcc ncctnttctn ntttctnttt tccctnctct gtttcacccc    480
tacctcttat ccntnctnct naattcannc tcngncnntn nnnncnccnt aaatntangn     540
nnannntnnn atntnctctt ctccntttat atcgccctctt ctctncttct cnnttctctc    600
tctcannca tctcnantnt nttctactct cgtncnntat ctannctcct ntttengtcc     660
tnttctctct ntcatttcta tattncttct canacantnt tcgcacgtgn gcancatctc    720
ctcccatctc ctgtncnctn ttcen                                           745

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<210> 22

<211> 614

<212> DNA

<213> Homo Sapien

<220>

<221> 2-4, 9, 19, 23, 47, 613

<222> (3)...(3)

<223> N can be any nucleotide

<400> 22

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gnnnntaant cattcccnc tcnatgcatg ctcgagcggc cgccagngtg atggatatct      60
gcagaattcg cccttggttc ggaggcagta gatgaatggg ttgatggaat ctgagacagt     120
gctctagaat ctgtgtttca tacaggatga gatataaatg aaacaaatgc taaataatga     180
cacaagggtac cttgccgaga gaggaatcat ccacctggaa gggtaggctg tttgtgaata     240
atgtagggtg ggagagaagg ctttactaag gagatgggct taaagaatgt gaacgatgtg     300
ctcacagagg ccacagaaga gaaattatag ccaggagaac aacctgaaag acaaaggaca     360
cggtggcatg agcgcatgta acacaatgta ctcaggaaat ggctggcatc ctgagatatg     420
gagtgggaata cagtacaggg ctttgtaaac tcagcttggg gtcagatcac agaaagcctt     480
gacaaggaac tgaaaatggg ttctgaaggc cagaagccca ttcaagattc ccaaagggaa     540
aaacacaaat cagcttggtt tcaggacgta attcttggca gttgctagaa ttacatcaga     600
aaggagggtc acnt                                                         614

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<210> 23

<211> 621

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 6, 8, 12-13, 16, 507, 561, 583, 592

<223> N can be any nucleotide

<400> 23

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gnnnntnanc anncantggg ccctctagat gcatgctcga gcggccgccca gtgtgatgga      60
tatctgcaga attcgccctt cctatgtatt tctcttactt gggctttcct ggttctcaaa     120
ctcttcagct ctctctcttt atgctttttc tgggtgatgta catccccaca gttagtggta     180
atgtggctat cttgatgttg gtgagcacct cccatcagtt gcataccccc atgtacttct     240
ttctgagcaa cctctccttc ctggagattt ggtataccac agcagcagtg cccaaagcac     300
tggccatcct actggggaga agtcagacca tatcatttac aagctgtctt ttgcagatgt     360
actttgttat ctcataggg tgcacagagt acttctcctt ggcagccatg gcttatgacc     420
gctgtcttgc catctgctat cctttacact acggagccat catgagtagc ctgctctcag     480
cgcagctggc cctgggctcc tgggtgnggg ggttcgtggc cattgcaagt gccacaagc     540
cctaactcag ggcctgtcc ntctgggggc ccccgggcca ttnaccactt tnttctggga     600
caattgcacc cctggaattg g                                           621

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<210> 24

<211> 612
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 8, 16, 20, 26, 557
 <223> N can be any nucleotide

<400> 24
 tnnttaantc attcctnttgn ccctcnagat gcatgctcga gcggcccgcca gtgtgatgga 60
 tatctgcaga attcgccctt tccttggttac tgaggggagta gattagggga ttgatggaat 120
 ctgagacagt gctctagaat ctgtgtttca tacaggatga gatataaatg aaacaaatgc 180
 taaataatga cacaaggtac cttgccgaga gaggaatcat ccacctggaa gggtaggctg 240
 tttgtgaata atgtaggggtg ggagagaagg ctttactaag gagatgggct taaagaatgt 300
 gaacgatgtg ctcacagagg ccacagaaga gaaattatag ccaggagAAC aacctgaaag 360
 acaaaggaca cggtggcata agcgcattgta acacaatgta ctcaggaaat ggctggcatc 420
 ctgagatatg gagtgggaata cagtacaggg ctttgtaaac tcagcttgga gtcagatcac 480
 agaaagcctt gacaaggaac tgaaaatggg ttctgaaggc cagaagccat tcaagattcc 540
 caaagggaaa aacacanatc acttgttttc aggacgtatt cttgggcagt tgctagaatt 600
 acatcagaaa gg 612

<210> 25
 <211> 632
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 9, 614
 <223> N can be any nucleotide

<400> 25
 gnnnttant ccattgccct ctagatgcat gctcgagcgg ccgccagtgt gatggatatc 60
 tgcagaattc gcccttggtt cgcagcctat aaatgaagg gttgatggaa tctgagacag 120
 tgctctagaa tctgtgtttc atacaggatg agatataaat gaaacaaatg ctaaataatg 180
 acacaaggta ccttgccgag agaggaatca tccacctgga agggtaggct gtttgtgaat 240
 aatgtagggt gggagagagg gctttactaa ggagatgggc ttaaagaatg tgaacgatgt 300
 gctcacagag gccacagaag agaaattata gccaggagaa caacctgaaa gacaaaggac 360
 accggtggca taagcacatg taacacaatg tactcaggaa atggctggca tcctgaggta 420
 tggagtggaa tacagtaccg gggctttgta aactcagctt ggagtcagat ccagaaagcc 480
 cttgacaagg aactgaaaat tgggttcttg aaggccagaa gccattcaag gattccccaa 540
 aggggaaaaa cacaatcaa gcttgttttc agggaccgtt aattctgggg ccaggttgct 600
 tgaattacct tcangaaagg gaggttcaca ct 632

<210> 26
 <211> 628
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-3, 419, 423, 426, 437, 439, 453, 460, 463, 469, 478, 489, 492,
 536, 539, 579, 583, 586, 594, 598, 616, 623, 627
 <223> N can be any nucleotide

<400> 26
 gnncttattc atccccctct agatgcatgc tcgagcggcc gccagtgtga tggatatctg 60
 cagaattcgc cctttctttg ttcttcagag tgtagattag ggggttgatg ggggttgatg 120
 aatctgagac agtgctctag aatctgtgtt tcatacagga tgagatataa atgaaacaaa 180
 tgctaaataa tgacacaagg taccttgccg agagaggaat catccacctg gaagggttagg 240


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ctgtttgtga ataatgtagg gtgggagaga aggcctttact aaggagatgg gcttaaagaa      300
tgtgaacgat gtgctcacag aggccacaga agagaaatta tagccaggag aacaacctga      360
aagacaaagg acacgggtggc ataagcgcac gtaacacaat gtactcagga aatggctgnc      420
atnctnagat atggagngng aataccagta canggccttn tanactcanc ttggagtnca      480
gaatcacana angccttgca aggaactgaa aatgggttct gaaaggccag aagccnttna      540
agattcccaa agggaaaaaa cacaaatcaa gctttttttna agnacngtaa ttentggngc      600
cagttgctta gaattnccat canaaaang                                         628

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<210> 27

<211> 803

<212> DNA

<213> Homo Sapien

<220>

<221> variation

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<222> 3-4, 19, 168, 190, 202, 245-246, 250, 260, 266, 280, 281, 284, 286,
289, 301, 303, 305, 313, 332-333, 348, 355, 357, 360, 365-366, 370, 372, 376,
379, 384, 387-390, 394-396, 400, 406-407, 411-412, 416-418, 421, 423, 430,
439-440, 442-443, 446, 448, 462-463, 468-469, 480, 482-483, 490, 493, 498,
506-508, 518-519, 523, 532-534, 536, 539-547, 549, 556, 559, 573-575, 580-
581, 587, 590, 595-596, 600-601, 603, 612, 614, 618, 623, 629, 633, 640, 643,
646, 655-656, 658, 666, 682, 689, 696, 704, 708-709, 718, 721, 732, 738-739,
743, 746, 751, 759, 764-765, 771, 775, 782-783, 788-789, 791-792, 795, 801

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<223> N can be any nucleotide

<400> 27

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ggnttaagcc ttccccctnc gatgetgctc gagcgggcgc cagtgtgatg gatatctgca      60
gaattcgccc ttcccatgta ttccctctta ctgggctttc ctgggttctca aactcttcag      120
ctctctctct ttatgctttt tctgggtgatg tacatcctca cagttagnng taatggggct      180
atcttgatgn tgggtgagcac cccccatcag ttgcataccc ccatgtactt ctttctgagc      240
aaccnntccn tectggagan ttgggnatac cacacgcaan nagnngccna aggcacttgg      300
nctnctaca gngggagaag gcttgaccat annattttac catgcctngc cttangncan      360
accnntctn tncctntnt tccnctnnnn ggtnnntcan ccgcannctt nnatcnnttg      420
nancttcatt gaatatggnn tnngtntntc ttgagagcct cnngatcnna ttttttccan      480
cnnctaaagn gnggcttntc tctctnnnat ctatgcttnt ggntctcttt tntntnctna      540
cccgtgntnt cctatntgnt gtctcttctt acnnnctgcn nttattntan atcanntctn      600
nctttgctct cntntacnac atnatcatnc tcnctcccn ctntcnctct ctatnnenta      660
ccatcnctct cttctcattc anctctttnt cattgnttgt tcanttannc actctccntc      720
ncatcttcta tncactannt ttntnttttt nctctctant tctnnttcca ntgtncactc      780
cnntctttnn nnttncccta ncg                                              803

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<210> 28

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 4, 7, 9, 10, 11, 24, 563

<223> N can be any nucleotide

<400> 28

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gtntttnann ncattgcccc tctngatgca tgctcgagcg gccgccagtg tgatggatat      60
ctgcagaatt cgcccttctt atgtacttcc tcttaccggg ctttctctgg tctcaaactc      120
ttcagctctc tctctttatg ctttttctgg tgatgtacat cctcacgggt agtggtaatg      180
tggtatcttt gatgttggtg agcacctccc atcagttgca taccctcatg tacttctttc      240
tgagcaacct ctcttctctg gagatttggg ataccacagc agcagtggcc aaagcactgg      300
ccatcctact ggggagaagt cagaccatat catttacaag ctgtcttttg cagatgtact      360
ttgttttctc attaggctgc acagagtact tctctctggc agccatggct tatgaccgct      420
gtcttgccat ctgctatcct ttacactacg gagccatcat gagtagcctg ctctcagcgc      480
agctggccct gggcttctgg gtgggtgggt ttcgggggcca ttgcaagtgc ccacagccct      540

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tatcaagtgg cctgtccttc tgnnggcccc gggcccatca accacttttt tctggggaca 600
attgcaccct ggaatggccc 620

<210> 29
<211> 620
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 3-5, 7-9, 15, 567, 574, 585, 596, 606, 611-612, 616, 618-619
<223> N can be any nucleotide

<400> 29
gtnnntnnnt ccatnccatt gggccctcta gatgcatgct cgagcggccg ccagtgtgat 60
ggatatctgc agaattcgcc ctttcatggt tccggaaaca gtaaattatg gggttcagtc 120
atggtaacag gaggaggctg agtgtatggg catggatggg ggctgtgaat gtggcgggag 180
ctcatggatg tgctcttctg agtgcttcac gtttctgagt gaaataagaa gcaagggtcat 240
caccgagagg gaggagacag gctcgggtga gtttagtgga tatgaatcca agagagacca 300
ttcaacttag ttgtctatatt tttttttctc cagttatagt cacttgcatg aatgtagatg 360
tgagagtactt gatcataaga tccattttat ggcagaagac attatttttc tgagccttct 420
gctgtcagtt tctaaataag caggccagcc gggctgtgca cctaaatgtc tgtctgggag 480
gagcaggctg agaagtcttg cagtctgcag gacacccgag gaatcgtatt gtgggaaccg 540
tcccgcagaa ccacacgagc cgtgctnctc agtnctgact ggaanaatga aattgnaagc 600
caagtngttc nngganctnt 620

<210> 30
<211> 616
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-4, 7, 9-10, 580
<223> N can be any nucleotide

<400> 30
gnnnttnann ccattgcgcc ctctagatgc atgctcgagc ggccgcccagt gtgatggata 60
tctgcagaat tcgcccttcc tatgtatttc tcttcctaac gattggaatg cctgggatta 120
ggcagatgat tttctttttc ccccatatcc ctctattatt taggtgattg agtttaaatc 180
cctttatcta cacccttcgg aacaaggcg aattccagca cactggcggc cgttactagt 240
ggatccgagc tcggtaccaa gcttgatgca tagcttgagt attctaacgc gtcacctaaa 300
tagcttgggc taatcatggt catagctgtt tcctgtgtga aattgttatc cgctcacaat 360
tccacacaa atacgagccg gaagcataaa gtgtaaagcc tggggtgcct aatgagttag 420
ctaactcaca ttaattgcgt tgcgctcact gcccgccttc cagtcgggaa acctgtcgtg 480
ccagctgcat taatgaatcg gccaacgcgc ggggagaggc gggttgcgta ttgggcgctc 540
ttccgctttc tcgctcactg actcgctggg cttcggtcgn tcggctgcgg cgagcgggat 600
cagctcactc aaaagg 616

<210> 31
<211> 612
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-9, 13, 507, 554, 585, 598, 600, 609
<223> N can be any nucleotide

<400> 31
gnnnnnnnt cangccattg ggccctctag atgcatgctc gagcggccgc cagtgtgatg 60
gatatctgca gaattcgccc ttctatgta tttctcttca ctttctccga catcactcac 120

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agccacccca cctcagcct ctcctcctc ccatgtatctt tctcttcaat ctctccttct 180
ttgatatacct gaactttctg tagctcttta tttctcttc caatcccttc atatacacgt 240
ttcgtaacaa gggcgaaatc cagcacactg gcggccgtta ctagtggatc cgagctcggg 300
accaagcttg atgcatagct tgagtattct aacgcgtcac ctaaatagct tggcgtaatc 360
atggtcatag ctgtttcctg tgtgaaattg ttatccgctc acaattccac acaacatacg 420
agccggaagc ataaagtgt aagcctgggg tgcctaata gaagagctaac tcacattaat 480
tgcgtgcgct cactggccgc tttccangtc gggaaacctg tcggccagct gcattaaatg 540
aatcgcccaa cgcnccgga gaggcggtt gcgtattggg cgctntttcg ttcttcgntn 600
actgatcgnt gg 612

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<210> 32

<211> 616

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-9, 15, 521, 596

<223> N can be any nucleotide

<400> 32

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gnnnnnnnnt tcatnccatt gggccctcta gatgcattgt cgagcggccg ccagtgtgat 60
ggatatctgc agaattcgcc cttgttgctt agagtgtaaa taaaagggtt aacattggct 120
tagaggtgaa gagtaatac atagggaagg cgaattccag cacactggcg gccgttacta 180
gtggatccga gctcgggtacc aagcttgatg catagcttga gtatttctaac gcgtcaccta 240
aatagcttgg cgtaatcatg gtcatactg tttcctgtgt gaaattgtta tccgctcaca 300
attccacaca acatacagc cggaagcata aagtgtaaag cctgggggtgc ctaatgagtg 360
agctaactca cattaattgc gttgcgctca ctgcccgtt tccagtcggg aaacctgtcg 420
tgccagctgc attaatgaat cggccaacgc gcggggagag gcggtttgcg tattgggcgc 480
tcttcgctt cctcgtcac tgactcgctg cgctcggtcg ntcggctgcg gcgagcggtg 540
tcaagctcac tcaaaggcgg taatacgggt atccacagaa tcagggggat acgcangaaa 600
gaacatgtga gcaaat 616

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<210> 33

<211> 621

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4, 6, 8, 19, 27, 31, 464, 526, 554, 578, 598, 600, 615

<223> N can be any nucleotide

<400> 33

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gntntnanc atgccccnc cgatgcntgc ncgagcggcc gccagtgtga tggatatctg 60
cagaattcgc ccttggttgc gagcgaatat atgaaggggt taagggaaga gaaaatacat 120
aggaagggcg aattccagca cactggcggc cgttactagt ggatccgagc tcggtaccaa 180
gcttgatgca tagcttgagt attctaacgc gtcacctaaa tagcttggcg taatcatggt 240
catagctggt tctgtgtgta aattgttate cgctcacaat tccacacaac atacgagccg 300
gaagcataaa gtgtaaagcc tggggtgcct aatgagttag ctaactcaca ttaattgcgt 360
tgcgtcact gcccgtttc cagtcgggaa acctgtcgtg ccagctgcat taatgaatcg 420
gccaacgcgc cggggagagg cgggttgcgt attgggcgct cttncgcttc ctgctcact 480
gactcgcttg cgctcggtcc gttcggctgc ggcgagcgg atcaantcac tcaaaaggcg 540
ggaatacggg tttncacaga aatcaggggg ataacgcngg aaagaacatg tgagccanan 600
ggcagcaaaa gggcnaggaa t 621

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<210> 34

<211> 614

<212> DNA

<213> Homo Sapien

<220>
 <221> variation
 <222> 2-9, 13-14, 593
 <223> N can be any nucleotide

<400> 34
 gnnnnnnnnnt canncattg ggccctctag atgcatgctc gagcgccgc cagtgtgatg 60
 gatatctgca gaattcgccc ttgttccgaa ggctatagat gaaggggtt taggttttta 120
 ggaacacagg ctaaggggga agagaaaata catgggaagg gcgaattcca gcacactggc 180
 ggccgttact agtggatccg agctcggtag caagcttgat gcatagcttg agtattctaa 240
 cgcgtcacct aaatagcttg gcgtaatcat ggctcatagct gtttcctgtg tgaaattgtt 300
 atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtaaa gcctgggggtg 360
 cctaattgagt gagctaactc acattaattg cggtgcgctc actgcccgtt tccagtcgg 420
 gaaacctgtc gtgccagctg cattaatgaa tcggccaacg cgcggggaga ggcggtttgc 480
 gtattgggag ctcttccgct tcctcgctca ctgactcgct gcgctcggtc gtcggctgcg 540
 gcgagcggtg tcagctcact caaaggcggt aatacggtg tccacagaat cangggataa 600
 cgcaggaaaa gaca 614

<210> 35
 <211> 614
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-4, 7, 9, 23, 599, 611
 <223> N can be any nucleotide

<400> 35
 ggnnttnant cattgccccg ctngatgcat gctcgagcgg ccgccagtgt gatggatatac 60
 tgcagaattc gcccttccga tgtattttct tctacgttaa ggtattttta attgttacta 120
 atgcataagg gcaacacatt ctgtaatgct gacaagatga aagagccaaa agtaattaat 180
 gatgctgtta cctcacaat atgtatgtgt ggatgtatat atatctattc aatataatgta 240
 actatacata tgtctgtttc taattgaaaa caccaggtaa ttatcatctg tagaaaccct 300
 agtgtctcag ataagttggc tagttttttg tttcacataa aggaacaaac atttatagat 360
 ttatatgtat attaaaaatg gtaaaaattg gctgggtgca gtggttcatt cctataatac 420
 cagcactttg ggaagccgag gtgggcggat tacttgaggt aaggagccca gcctgaccaa 480
 caaggtgaaa ccccatccct actaaaaata caagaattag cccggggatg gtggtggcca 540
 cctgtaatcc cagctacttg ggagactgaa gccaggaaaa tcacttgacc caggaagcng 600
 aggttgcagg ngag 614

<210> 36
 <211> 611
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 1, 3-5, 10, 18-20, 22, 26, 605
 <223> N can be any nucleotide

<400> 36
 ngnnttgann tcaattcnnn gncgangcat gctcgagcgg ccgccagtgt gatggatatac 60
 tgcagaattc gcccttccca tgtatttctt tctagccaac ctcccactca ttgatctgtc 120
 tctgtcttca gtcataggcc ccaagatgat tactgacttt ttcagccagc gcaaagtcac 180
 ctctttcaag ggctgccttg ttcagatatt tctccttcac ttctttggtg ggagtggat 240
 ggtgactctc atagccatgg gctttgacag atatatagca atatgcaaac ccctacacta 300
 cactacaatt atgtgtggca acgcatgtgt cggcattatg gctgtcgcat ggggaattgg 360
 ctttctccat tcggtgagcc agttggcctt tgccgtgcac ttacccttct gtggtcccaa 420
 tgaggtcgat agtttttatt gtgaccttcc tagggtaacc aaacttgctt gtacagatac 480
 ctacaggcta gatattatgg tcattgctaa cagtgggtgt ctcactgtgt ggtcttttgt 540

cttctaataca tctcatacac tatcatccta atgaccatcc agcattgccc tttagataag 600
tcgtncaaag g 611

<210> 37
<211> 616
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 2-4, 6, 8, 12-14, 17, 19-20, 442, 595, 599
<223> N can be any nucleotide

<400> 37
gnnnntnancn cnnncncnn ctagatgcat gctcgagcgg ccgccagtgt gatggatatac 60
tgcagaattc gcccttccca tgtatttgct tctcagcaac ttgtccttct ctgacctctg 120
cttctcttcc gtgaccattc ccaagttggt acagaacatg cagaaccagg acctggagaa 180
cccctatgcg gactgcctga cccaaatgta cttcttctctg ttatttggag acctggagaa 240
cttcctcctt gtggccatgg cctatgaccg ctatgtggcc atctgcttcc cctgcacta 300
caccgccatc atgagcccca tgcctctgtc cgccctgggt gcgctgtcct ggggtgctgac 360
caccttccat gccatgttac acactttact catggccagg ttgtgttttt gtgcagacaa 420
tgtgatcccc cactttttct gngatatgtc tgctctgctg aagcaggcct tctctgacac 480
tcgagttaat gaatgggtga tatttatcat gggagggtc attcttgtca tcccattcct 540
actcattctt gggctcctatg caagaattgt ctctcatcc tcaagggtccc tttntaang 600
gtatctgcaa ggcct 616

<210> 38
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 1, 3-6, 9, 11, 14, 16, 20, 21, 23, 540, 566
<223> N can be any nucleotide

<400> 38
ngnnnnnttna ntchhangcnn ngngccctct agatgcatgc tcgagcggcc gccagtgtga 60
tggatatctg cagaattcgc cctccaatg tatttacttc tcagccagct ctcccttatg 120
gacctgatgt acatctccac caccgtcccc aagatggcgt acaacttcct gtccggccag 180
aaaggcatct ccttcctggg atgtgggtgtg caaagcttct tcttcctgac catggcggtgt 240
tctgaaggct tactcctgac ctccatggcc tacgaccgtt atttggccat ctgccactct 300
ctctattatc ctatccgcat gagtaaaatg atgtgtgtga agatgattgg aggcctcttg 360
acactggggt ccatcaactc cttggcacac acagtctttg cccttcatat tccctactgc 420
aggtctaggg ctattgacca tttcttctgc gatgtcccag ccatgttget tcttgetgta 480
cagatacttg ggtctatgaa tatatggttt ttgtaaggac aaagcctctt tcttcttttn 540
cctttcattg gcatcacttc ttctgngggc cgagtcctaa ttgctggcta tataatgcac 600
tcaaaggagg ggagg 615

<210> 39
<211> 615
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 4-8, 12-13, 17-18, 22-23, 26-28, 469, 591, 596
<223> N can be any nucleotide

<400> 39
tagnnnnntt anntcanngc cnntgnnngc tcagatgcat gctcgagcgg ccgccagtgt 60

gatggatata	tgcagaattc	gcccttccaa	tgtattttct	tctcagcagg	agagatat	120
atcctcactg	ccatgtccta	tgaccgctat	gtagccatct	gctgtccct	gaactacgag	180
gctgcacaga	gtacttcctc	ctggcagcca	tggcttatga	ccgctgtctt	gccatctgct	240
atcctttaca	ctacggagcc	atcatgagta	gcctgtcttc	agcgcagctg	gccctgggct	300
cctgggtctg	tggtttcgtg	gccattgcag	tggccacagc	cctcatcagt	ggcctgtcct	360
tctgtggccc	ccgtgccatc	aaccacttct	tctgtgacat	tgcaccctgg	attgccctgg	420
cctgcaccaa	cacacaggca	gtagagcttg	tggcctttgt	gattgctgnt	gtggttatcc	480
tgagttcatg	cctcatcacc	cttgtctcct	atgtgtacat	catcagcacc	atccttagga	540
tcccctctgc	agtggccgga	gcaaagcctt	ctcccgtgct	cctcgcacat	naacngngtg	600
ctcatttggt	atggg					615

<210> 40

<211> 586

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 14, 21, 23, 479, 498, 534, 584

<223> N can be any nucleotide

<400> 40

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gcttctcagc	aggagagata	tttatcctca	ctgccatgtc	ctatgaccgc	tatgtagcca	120
tctgctgtcc	cctgaactac	gaggtgattc	atgtgcccac	tagagcttga	gaagcactgc	180
ttggaagccc	cttctgccat	caatgaggct	gcacagagta	cttcctcctg	gcagccatgg	240
cttatgaccg	ctgcccttgc	atctgctatc	ctttacacta	cggagccatc	atgagtagcc	300
tgctctcagc	gcagctggcc	ctgggctcct	gggtctgtgg	ttcgtggcc	attgcagtgc	360
ccacagccct	catcagtggc	ctgtccttct	gtggcccccg	tgccatcaac	cacttcttct	420
gtgacattgc	accctggatt	gccctggcct	gcaccaacac	acaggcagta	gaagcttgng	480
gcctttgtga	attgctgntg	tgggtatccc	gagttcatgc	ctcatcacc	ttgncttcta	540
tgtgtacatc	atcaggcacc	attctcagga	tcccttctgc	aagngg		586

<210> 41

<211> 857

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 5-12, 16-18, 22, 27, 32, 42, 60, 99, 159, 171, 202, 212, 240, 242, 251, 306, 330, 371, 568, 669, 750, 802, 840, 856

<223> N can be any nucleotide

<400> 41

atggnnnnnn	nnntttnnnaa	anttttnccc	antttgggcc	gnccccccct	tctttaaggn	60
aatgggcccc	ttgggccctt	cccggaaagg	ccggggggcnc	ccggccccaa	aggtttgggt	120
tgggaaatgg	ggggaattta	aattcctttg	ggccaaggna	aaaattttcc	ngccccctt	180
tttttccctt	tttggttttt	anccggggga	angggggggt	tgattaatta	atcggggaagn	240
tnggggggaa	nttttttaaa	aaaaaccttg	ggggaagggt	ccaacccaac	aaggttgggt	300
ttccanggga	ccgttgggac	caggcttttn	gaatcaagaa	tcccaaaggg	cattcttttg	360
gattaaggaa	nggtgccggg	accggtgaaa	gggaaaaaac	tggtggaccc	cataccaaaa	420
tgagaaccac	ggtgagatgc	cgaggagcac	gtggagaaag	gctttgtctc	cggccactgg	480
cagaggggat	cctgaggatg	gtgcttgatg	atgtacacat	agggagacaa	gggtgatgag	540
gcatgaactc	aggataacca	caacagcnat	cacaaaggcc	acaaagctct	actgcctgtg	600
tgttgggtgc	aggccagggc	aatccagggg	tgcaatgtca	caagaaagaa	agtggttgat	660
ggcacggng	ggccacagaa	ggacaggcca	cttgatgaag	ggcttggtgg	cactgcaatg	720
gccacgaaac	caccagaccc	aggaaacccan	ggccaagctt	gcgcctgaag	agcaaggcta	780
ctcatgaatg	gcttccgtag	tngtaaagga	tagcaagatg	gcaaaggcaa	gccggtcatn	840
aagccatggc	ttgceng					857

<210> 42

<211> 620
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 8-10, 43, 611, 613
 <223> N can be any nucleotide

<400> 42
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 tctgcagaat tcgcccttgt tgcgcaagga gtagatgaac ggattcaggg caagggagtg 120
 ctgaggagat agacgggtat aactgggca caagtccatg agtaatcaag gcctgttatt 180
 taaaaaaaaa aaaaaaaaaa cttgaacaat atagaatccc attaccaga gatagactgg 240
 atggtgaatt aaactttctg gtgaatttct ttccagatat ctctctatgc atatgtatac 300
 acaagcaatt tttggaagaa aagatacttt ataaggataa gcctgaaaac tgcaacgaat 360
 gcaatgtgga gaatgaaggc aagatgtggc gaagaagggc accacaatct ggtggctgag 420
 agagtgaac tgtcactaca gctaaaagga gagctggaga agctggtgag gacagtaaga 480
 gatgaatctg gtttaagaca cgctgagtc caaatgccat ggctccccta ggttgccctc 540
 tcagatgtaa atcttaagct caaagcaggt ggatgagaaa tcacatttca tagtccctgc 600
 acagacggct ntnttgagct 620

<210> 43
 <211> 608
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 10, 22-24, 27, 592
 <223> N can be any nucleotide

<400> 43
 gnnnttaan tcattgcccc gnnngangca tgctcgagcg gccgccagt tgatggatat 60
 ctgcagaatt cgcccttccc atgtatttgc ttctcagcaa cttgtccttc tctgacctct 120
 gcttctcttc cgtgaccatt cccaagttgt tacagaacat gcagaaccag gacctgga 180
 tccccatgc ggactgcctg acccaaatgt acttcttctt gttatttggg gacctggaga 240
 gcttctctct tgtggccatg gcctatgacc gctatgtggc catctgcttc cccctgcact 300
 acacggccat catgagcccc atgctctgtc tcgccctggt ggcgctgtcc tgggtgctga 360
 ccaccttcca tgccatgtta cacactttac tcatggccag gttgtgtttt tgtgcagaca 420
 atgtgatccc caacttttct tgtgatattg ctgctctgct gaagctggcc ttctctgaca 480
 ctcgagttaa tgaatgggtg atatttatca tgggagggct cattcttgca tccattccta 540
 ctcatccttg ggtcctatgc aagaaatgct cctcatcttc aaggcccttc tntaagggtg 600
 tctgcaag 608

<210> 44
 <211> 608
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 7, 9, 12, 20, 24, 26, 29, 31-32, 480, 530, 557, 579
 <223> N can be any nucleotide

<400> 44
 gnnntnntn cntgccctgn ccnengcnc nngcgccgcg ggggatggat atctgcagaa 60
 ttgcgccttg ttactaagag tatagatgaa cggattcagg gcaagggagt gctgaggaga 120
 tagacgggta tacactgggc acaagtccat gagtaatcaa ggcctgttat taaaaaaaaa 180
 aaaaaaagct tgaacaatat agaatcccat taccagaga tagactggat ggtgaattaa 240
 actttctggt gaatttcttt ccagatatct ctctatgcat gtgtatacac aagcaatttt 300

tggaagaaaa	gatactttat	aaggataagc	ctgaaaactg	caacgaatgc	aatgtggaga	360
atgaaggcaa	gatgtggcga	agaagggcac	cacaatctgg	tggctgagag	agtgcaactg	420
tcactacagc	taaaaggaga	gctgggagaag	ctgggtgagga	cagtaagaga	tgaatctggn	480
ttaagacacg	ctgagtctca	gatgccatgg	cttccttagg	ttgcctcttn	cagatgtaaa	540
tcttaagctc	aaagcangtg	gatgagaaat	acacatttna	tagtcacctg	cacagacggt	600
tttttgat						608

<210> 45

<211> 602

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 14, 16, 19, 21, 23-24, 27, 38, 40, 50, 52, 520, 551

<223> N can be any nucleotide

<400> 45

catgccccgt	ccnncnagnt	ncnngcnccg	cggccgcgnan	ggatatctgn	anaattcgcc	60
cttcctatgt	atttacttct	ccaacttctc	cttcccatct	ctatcattag	aacccattca	120
tatacacccct	acgaaacaag	ggcgaattcc	agcacactgg	cggccgttac	tagtggatcc	180
gagctcggtga	ccaagcttga	tgcataagctt	gagtattcta	acgcgtcacc	taaatagctt	240
ggcgtaataca	tggtcatagc	tgtttcctgt	gtgaaattgt	tatccgctca	caattccaca	300
caacatacga	gccggaagca	taaagtgtaa	agcctggggt	gcctaataag	tgagctaact	360
cacattaatt	gcgttgcgct	cactgcccgc	tttccagtcg	ggaaacctgt	cgtgccagct	420
gcattaatga	atcggccaac	gcgcggggag	agggcggttg	cgtattgggc	gctcttccgc	480
ttctcgctca	ctgactcgct	gcgctcggtc	gttcggctgn	ggcgagcggt	atcagctcac	540
tcaaaggcgg	naatacggtt	atccacaaga	atcaggggga	taacgcaaga	aaagacatgt	600
ga						602

<210> 46

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 6, 10

<223> N can be any nucleotide

<400> 46

gnnntnattn	attgcattgg	gccctctaga	tgcattgctg	agcggccgcc	agtgtgatgg	60
atatctgcag	aattcgccct	tagtgagtag	atgaaagggt	tcagcatggg	ggtcaccaca	120
gtgtacatca	tagccatgac	agtgtccttt	agagtagaac	tattagctga	tgagcataag	180
tagagaccaa	taacggttcc	atagaacagt	gacaccacag	atagggtggga	gccacaagta	240
gagaaggcct	tgcagacacc	cttagaagaa	gggaccttga	ggatggagga	gacaattctt	300
gcataggacc	caaggatgag	taggaatggg	atgacaagaa	tgagccctcc	catgataaac	360
atcacccatt	cattaactcg	agtgtcagag	aaggccagct	tcagcagagc	agacatatca	420
cagaaaaggt	gggggatcac	attgtctgca	caaaaacaca	acctggccat	gagtaaagtg	480
tgtaacatgg	catggaaggt	ggtcagcacc	caggacagcg	ccaccagggc	gagacagagc	540
atggggctca	tgagggcggt	gtagtgcagg	gggaagcaga	tggccacata	gcggtcatag	600
gccatggcca	caaggaggaa					620

<210> 47

<211> 607

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 572, 578, 594

<223> N can be any nucleotide

<400> 47

cnatgggccc	tctagatgca	tgctcgagcg	gccgccagtg	tgatggatat	ctgcagaatt	60
cgcccttcca	atgtatttgc	ttctcagcaa	cttgctcttc	tctgacctct	gcttctcttc	120
cgtgaccatt	cccaagttgt	tacagaacat	gcagaaccag	gacccatcca	tcccctatgc	180
ggactgcctg	acccaaatgt	acttcttcc	gttatttggg	gacctggaga	gcttctctct	240
tgtggccatg	gcctatgacc	gctatgtggc	catctgcttc	cccctgcaact	acaccgccat	300
catgagcccc	atgctctgtc	tcgccctggg	ggcgctgtcc	tgggtgctga	ccaccttcca	360
tgccatgtta	cacactttac	tcattggccag	gttggtgttt	tgtgcagaca	atgtgatecc	420
ccactttttc	tgtgatttgt	ctgctctgct	gaagctggcc	ttccctgaca	ctcgagttaa	480
tgaatgggtg	atatttatca	tgggagggct	cattcttgtc	atcccatcc	tactcaatcc	540
ttgggtctat	gcaagaaatt	gtcttcttca	tntcaangg	cccttctctc	taanggtatc	600
ttgcaag						607

<210> 48

<211> 613

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-4, 7, 9, 257, 266, 295, 313, 322, 331, 334, 338, 340, 345, 348, 356, 358, 365, 378, 397, 398, 402, 410, 447, 480, 536-537, 557, 563, 576, 580, 584-586, 606, 610-612

<223> N can be any nucleotide

<400> 48

annncntng	gagctccaaa	gcagtggtaa	caacgcagag	tacgccccct	atgtacttac	60
ttttgttaag	tccaacctcc	atctctcttg	gccttttgat	tcaattgatc	actccttctc	120
cctcaaaaaca	ccttggtcac	tcatectttc	tcagtctect	ttgtggattc	ttcctcattt	180
atttgacctc	ttgctgggtg	accctttcat	atacactctc	cgtaacaaaag	agggcgctact	240
tctgtcgtct	tgagcgnact	gatggnaccc	agcttttggt	cccttttagtg	agggntaatt	300
gcgcgcttgg	cgnaatcatg	gncatagctg	nttncctgngn	gaaantgnta	tttcgntnac	360
aattncacac	aacatacnag	ccgggagcat	aaagggnnaa	gncctggggg	gcctaattgag	420
ggagcttact	cacaataatt	ggggtgngcc	cactggcccc	ttttcaggcg	ggaaaacctn	480
gcggggccag	ctggaataaa	tgaatcgggc	cacgcgccgg	ggaggagggc	gggttnngga	540
attgggcgct	ttttcctttt	ctnggttaat	ggactnggtt	ggcnnngtcc	gttcgggttg	600
ggggancggn	nnt					613

<210> 49

<211> 593

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 177, 298, 506, 515, 578, 582

<223> N can be any nucleotide

<400> 49

aacgcagagt	accgcccact	acgtaatctg	tacatgaaag	ggtttaaaag	agactgggaa	60
gagaggaatt	ggcaagatca	agcagaggca	actccttcta	gtccttctag	taccgcaagg	120
ggcagataaa	tggaatgggt	aacacctaga	ggaaagtata	cttgccaaaa	gcaaatncat	180
aggggggagt	acattatcgg	gttgaaaaaa	gtattccatg	cagataaaaa	ccaaaagcaa	240
atacatcggg	ggcgtacttc	tgctcgtctt	gagcgtactg	atggtaccca	gcttttgntc	300
cttttagtgag	ggttaattgc	gcgcttggcg	taatcatggg	catagctggg	ttctgtgtga	360
aattgttatc	ccgctcacia	ttcacacaac	atacgagccc	gggagcataa	agtgtaaagc	420
ctgggggtgcc	taatgagtgg	agcttactta	cattaaattg	cgttgcgctc	actggccgct	480
tttccaagtc	gggaaacctg	tcgtgncagc	ttcantaatg	aatcggccaa	cgccgcgggg	540
agaggcgggt	tgcgatttgg	gcgctcttcc	gcttcttngt	tnactgactt	cgg	593

<210> 50
 <211> 624
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-4, 11, 16, 20, 22
 <223> N can be any nucleotide

<400> 50
 gnnntttaac nccgngnctn cnagcagtg aacaacgcag agtacgcccc cgatgtactt 60
 tctttttcag tctcaagtct tctctttctc caaagatttt gtcttttcta ctacctgagc 120
 taccaaattcc cttgtcatca atttcaataa ctgtattctc ttcattcatt caacttcaaa 180
 cgtgtcatct cagaacaagc ttcattgttac ttccaatttt atccttcttg tttgctgatt 240
 ccaagaattc cagtcccatc taggcccgc aatgcattgtt cctgccaccc ttttcataatc 300
 ctcaattccc ttgtatcatc actttctctt tatatagcac agattccatg attcataaaca 360
 ataattatgt ttttttttgc atgtgctctt aatttctctt cttgctccta ttatcttcta 420
 tcatactttt ctggaaacac taattctggg gaaatatact ctttgtggac tttgcaactta 480
 tgctcagtc gctgaagatg atggctagac aaatactcac aatcatgctg actggcccaa 540
 tttatagtca tgaccaccga ttacaaaccc cttcatttat tctccgcaac aggggcgtct 600
 tctgcgcttg agcgtccggt gggg 624

<210> 51
 <211> 584
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 584
 <223> N can be any nucleotide

<400> 51
 gcagtggtaa caacgcagag tacgcccgtt acggaggctg taaataaagg ggttgaggaa 60
 gtaaagtact tcacagtact ggagcacaca gcatgtgaat ttcagccaaa ggacaaatgc 120
 ctccaaaaaa agttaattca cagtgcagca gggcgaggca cttgtcttat tcgctggttc 180
 tcacattgac cctgaaagga cttttttttg ttaatcccat tttcacagat gggaaagga 240
 ctctgtatgg ttgtcacttt tatccaaagt ctcatagcca gtaagaagct gccctcaaag 300
 tccctaccct gtcttcatt cgactattct gaggttcaga cccagaaacc ccatacctct 360
 gccttatatt ttaatgaaaa gtatgtctcc aggtttatgt ggagaataac caagacctca 420
 gaaacattta gtgaaaatca gagctagaag gaatctgttt ttttgcgagt tcagagaaac 480
 tgacttgat aagacatcaa agttgtcttg tgcagcaaat tctcctccg cacatagtag 540
 gcactctgat aaattcaaaa aggttcttaa gaagaggcag aagn 584

<210> 52
 <211> 613
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 6, 10-12, 16-17, 20, 553, 594, 607, 613
 <223> N can be any nucleotide

<400> 52
 gtgaanccan nntaannccn attggagctc caagcagtg taacaacgca gactacgccc 60
 ccgatgtagt ttcttctttc ctctctctcc tcttctctcc cttcttctcc ttctctctct 120
 ctccctctcc ctctctctcc ctctctctcc ctctctctcc ttctctctcc tctctctccc 180
 cccaatccgt tcatgacttc ttctctctcc tctctctctc cttctctctc ttctctctct 240

tctctaagca	ggatcctggg	ctgttcaaac	cagagagctg	taagtctttt	ctttcccat	300
tactgttaga	tccgttgaat	cggctccaga	aaccaaaca	gttaaccctt	gcatttacac	360
gtttcgtaac	gggcgtactt	ctgtcgtctt	gagcgtactg	atggtaacca	gcttttggtc	420
ccttttagtga	gggttaattg	cgcgcttggc	gtaatcatgg	tcatagctgt	ttcctgtggg	480
aaattgttat	cgcgtcaca	ttccacaca	catacgagcc	gggagcataa	aagtgtaaag	540
cctgggggtgc	ctnatgagtg	agctaactca	cattaattgc	gttgcgctta	ctgnccgttt	600
tcagtcngga	aan					613

<210> 53

<211> 611

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4-5, 7-9, 14-15, 601

<223> N can be any nucleotide

<400> 53

tnanncnnt	taanncccat	tggagctcca	aagcagtggt	aacaacgcag	agtacgcccc	60
cgatgtactt	gcttcttctt	ctttggagtg	gctgaatgct	tcctcctggc	taccatggca	120
tatgaccgct	atgtggccat	ctgcagtcct	ttgcactacc	cagtcacatc	gaaccaagg	180
actcgtgcca	aactggctgc	tgcctcctgg	ttcccaggct	ttcctgtage	tactgtgcag	240
accacatggc	tcttcagttt	tccattctgt	ggcaccaaca	aggtgaacca	cttcttctgt	300
gacagcccac	ctgtgctgag	gctgggtctgt	gcagacacag	cactgtttga	gatctacgcc	360
atcgtcggaa	ccattctggt	ggtcatgata	ccctgcttgc	tgatcttgtg	ttcctatact	420
cgcattgctg	ctgccatcct	caagatccca	tcagctaaag	ggaagaataa	agccttttct	480
acatgttctt	cacacctcct	tgggtgctct	cttttctata	tatcattaag	cctcacctac	540
ttccggccta	aatcaaataa	ttcacctgag	ggcacgaagc	tgctatcatt	gcctacactg	600
ntatgactcc	a					611

<210> 54

<211> 606

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 4, 483, 509-510, 606

<223> N can be any nucleotide

<400> 54

gttnttccat	ggactcccaa	gcagtggtaa	caacgcagag	tacgccccct	atgtacttac	60
ttcttgctgg	cttatcattt	atagatatca	tttattcttc	atccatttcc	cacagatcga	120
tttcagactt	gttctttggg	aataattcca	tatccttccc	atcttgcttg	gccagctct	180
ttacagagcg	cctttttggt	gggtcagagg	tctttcttct	gttggtgatg	gcctatgacc	240
ttgcattact	tggttatcat	gagacaatgg	gtgtgtgttt	tgctgctggg	agtgtcctgg	300
gttgaggat	ttctgcactc	agtatttcaa	cttagtgtaa	tttatgggct	cccattctgt	360
gacctcaatg	tcattgatca	ttttttctgt	gatatgcacc	ctttattgaa	actggctctgt	420
accgataccc	atgttattgg	cctcttagtg	gtggcaatgg	aggactaggt	tgactattg	480
ggnttctgct	cttactcatc	tcttatggnn	catctgcact	ctctaaagaa	ccttagtcag	540
aaagggaggt	gaaaagccct	ctcaacctgc	agttccacat	aactgggggg	tggtttcttc	600
tttgtn						606

<210> 55

<211> 630

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 4-5, 8-9, 12, 16, 19, 295, 298, 321, 472, 481, 573, 617

<223> N can be any nucleotide

<400> 55

ttannccnnt	tnaatnccnt	tggagctcca	aagcagtggt	aacaacgcag	agtacgcccc	60
caatgtactt	gcttcttctt	ttttggggct	gctgagtgct	gcctcctggc	caccatggca	120
tatgaccgct	acgtggccat	ctgtgacccc	ttgcactacc	cagtcacat	gggccacata	180
tcctgtgccc	agctggcaag	ctgcctcttg	gttctcaggg	ttttcagtg	ccactgtgca	240
aaccacatgg	attttcagtt	tccctttttg	tggccccaac	aggggtgaacc	acttntntng	300
tgacagccct	cctgttattg	nactgggtctg	tgctgacacc	tctgtgtttt	gaactggagg	360
ctcttgacag	ccactggcta	attcattctc	tttccctttc	tgctgaccc	gggacccat	420
ttcgcatctt	cttcactatc	tttaaggatg	ccgtcagctg	aggggaaaca	tnagcattct	480
ncacctgttc	cgccacctc	ttgggtggct	ctctcttcta	tagcactggc	aatccttaac	540
gtattttccg	acccaattc	aagtgccttt	ttntgagaag	caaagaaact	ggttgctact	600
tttttttcac	aagggngac	ttccaatggt				630

<210> 56

<211> 631

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2, 4, 8-10, 493, 582

<223> N can be any nucleotide

<400> 56

gngntttnnn	ccatggagct	ccaaagcagt	ggtaacaacg	cagagtacgc	ccccatgta	60
ctttcttctt	ctttggagtg	gctgaatgct	tctcctggc	taccatggca	tatgaccgct	120
atgtggccat	ctgcagtcct	ttgcactacc	cagtcacat	gaaccaaagg	actcgtgcca	180
aactggctgc	tacctcctgg	ttcccaggt	ttcctgtagc	tactgtgcag	accacatggc	240
tcttcagttt	tccattctgt	ggcaccaaca	aggtgaacca	cttcttctgt	gacagccac	300
ctgtgctgag	gctggctctg	gcagacacag	cactctttga	gatctacgc	atcgtcggaa	360
ccattctggt	ggtcatgatc	ccctgcttgc	tgatcttgtg	ttcctatact	cacattgctg	420
ctgccatcct	caaggtccca	tcagctaaag	ggaagaataa	agccttttct	acatgttctt	480
cacacctcct	tgntgtctct	cttttctata	tatcattaag	cctcacctac	ttccggccta	540
aatcaaataa	ttcacctgag	ggcaagaagc	tgctatcatt	gncctacact	ggtatgactc	600
catgttgaac	cccataattt	attcattcag	c			631

<210> 57

<211> 637

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 5-6, 76, 82, 92, 106, 122, 125, 142-143, 190, 214, 223, 244, 247, 259, 283, 290, 320, 402, 416, 455, 470, 529, 558, 561, 607, 618, 620, 630

<223> N can be any nucleotide

<400> 57

ttatnnccat	tggagctcca	aagcagtggt	aacaaccgca	gagtagcccc	cccatgtatt	60
ttctttttct	tggggnagct	gnatgcttcc	tnctggctac	catggnatat	gaccggctat	120
gnggncatct	gcagtcctct	gnnctcccag	tcattatgaa	ccaaaggaca	cgggccaaac	180
tggtgggtgn	ttcctgggtc	ccaagctttc	ctgnagctac	tgngcaagac	cacaatggct	240
cttnagnttt	ccattctgng	gcaccaacaa	ggtgaaccac	ttntttctgn	gacagccggc	300
tgtgctgaaa	gctggctctg	tgcaagacac	agcactgttt	gagatctacg	ccatcgctcg	360
aaccattctg	gtgggtcaatg	aacccttgct	tgctgatctt	gngttectat	actcgmatgt	420
gtgctgctat	ccctcaagaa	cccatcaagc	taaangggaa	gcaataaagn	cctttctcta	480
cgtgctcctt	aacacctccc	ttggtggcct	ctcttttcta	atataatcnt	ctaagcctca	540
acctacttct	tgggcctnaa	ntcaataaaa	ttcttctgga	gaggcaagaa	ggtgggtattc	600

atttatncta cactggtn gn gactccatgn tggaact

637

<210> 58

<211> 621

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 6, 9, 16, 19, 507, 597, 611

<223> N can be any nucleotide

<400> 58

gtnatnccnt ttaatnccnt tggagctcca agcagtggta acaacgcaga gtacgcccg	60
tcctcagaca gtatatgaat gggttaaaaa tgggccagag cagatgcagg aagatcaaat	120
aggaggctac tgcagtagag tcaaactctag ggctgatggg ttcttgggat gcatagtaat	180
aggtagatag agaaagtctt taggaggtag aatggacagg acttcacaat gcattaaatg	240
tagggagaaa aaaaatgatt cctgggtttc tagcttgagc tagtagggat agtggtagaa	300
tttactgata tggaaaactg gaggaaaaag agtttggaag agaaagatgg caagttaaat	360
acctgtggga aatataatca cagacactaa ataggcagct gtgtgggtgg caaaggagag	420
ccatgggcta ggaacataca gtgggattcc ctggcatgtc attgggtact gaagtcagag	480
tgtatgagac agcctaagga gagaatncac acaggagaag aaagaactaa acattcagtg	540
gctggccaga ggatgagaaa cccaagagat tggactgttt aggagcaaca gtgttngaa	600
aaggagaaa nggttgaat t	621

<210> 59

<211> 631

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 8, 9, 11, 29

<223> N can be any nucleotide

<400> 59

ggnnttannc nctggagctc caaagcagng gtaacaacgc agagtacgcc cattgcgtag	60
cgtgtacata aaggggttgg agctgaagga ggagataaag aagaagacag ccagaacctt	120
gtcctctgtc ggagatcgca gggatcttgg gccgtagata ggtataagca aaggggtgcat	180
agtagaaagt cactacagtg aggtgggtgc tgcaggtcga ataggccttc ttctccctt	240
ctgcagagtg catgtggtag acagcaagga gaatccggcc ataggaacat gcaatacaaa	300
tgaagggaaa cacaagaaaa atggtggtgc tcaaaaacac cgtgcactca tagaccagg	360
tatccgtgca ggctagggtc aacatagctg gaacatcaca gaaaaaatga ttgatggctc	420
tggacttgca atatgggata cggagtgcac ataccgtgtg agcacaagag ttgatggagc	480
ctatcatcca agatcctgtt atcatcagtg cacacactct tttctcata cggatgagat	540
agtggagagg aaagcaaata gccacataac gatcataggc cattgatgtc aggagcagcg	600
cttctgcacc tgctaaagtc aggaagaaga t	631

<210> 60

<211> 620

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 6, 10-11, 15, 18

<223> N can be any nucleotide

<400> 60

tggtantccn ntttctncc attggagctc ccaagcagtg gtaacaacgc agagtacgcc	60
ctccttgttt ctgagagtgt agatgaaggg gttataggag ataaagatca gggcaatatg	120

taggacaagg	acacagacac	tgacaacaaa	gttgattatc	tcattgacag	tggtgtctgt	180
gcaggccagc	ttcagcaggg	gtctcacatc	acagaagaag	tgggagatga	caaagtcac	240
acaaaagggc	aggccaaaca	tagatgttac	ttggacaata	gccatgcccc	ggccaatcct	300
cagtgaacca	gatccccagtc	agacacaagc	cctcttacct	atgaataccg	taaggggttg	360
cagaagacca	catagcaatc	atatcccatg	gctatgagaa	gaaagcagtt	gttgatgcca	420
aaagtcacat	agaagagctg	agtgcacacag	ccttgcatga	caataagcta	gtgaggattc	480
aagaggcgag	aaagcatatg	gggagtaatg	gccaccatgt	agcagggtctc	agagatagac	540
agcaatgctt	aggaaaaagt	acatggggccg	tactttctgtc	gtcttgagcg	tactgatggg	600
accagcttt	tggtcccttt					620

<210> 61

<211> 612

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 3, 5-6, 9-10, 20, 25, 37-38

<223> N can be any nucleotide

<400> 61

gtnannccnn	tgtagctccn	aagcngagct	aacaacnnag	agaacaacgc	agagtacgcc	60
cccgatgtac	ttgttcctac	tctttgctgg	atttgaaaac	ttcctcctgt	ccgtgatggc	120
ctatgaccgg	tttgtggcca	tctgtcacc	cctgcactac	atggtcatta	tgaaccctca	180
cctctgtgga	ctgctgggtc	tagcatcctg	gaccatgagt	gctctgtatt	ccttgctaca	240
aatcttaatg	gtagtacggc	tgctcctctg	cacagcctta	gaaatcccc	actttttctg	300
tgaacttaat	cagggtcatcc	aacttgcttg	ttctgatagc	tttcttaatc	acatgggtgat	360
atatttttaca	gttgcgctgc	tgggtggagg	ttccctcact	gggatccttt	actcttactc	420
taagataatt	tcttccatac	atgcaatctc	atcagctcag	gggaagtaca	aggcattttc	480
acctgtgcat	ctcacctctc	agttgtctcc	ttattttatg	gtgcaatcct	aggggtgtac	540
cttagtctgc	tgccacccgc	aactcacact	caagtgaac	agcctcagtg	atgtacactg	600
gggcaccccc	at					612

<210> 62

<211> 628

<212> DNA

<213> Homo Sapien

<220>

<221> variation

<222> 2-8, 13, 19, 22, 32, 35-41, 49

<223> N can be any nucleotide

<400> 62

gnnnnnnnat	ttnatgcct	tnttgattcc	cnttnnnnnn	ncaagcagng	gtaacaacgc	60
agagtacgcc	ccctatgtat	ttcttcctaa	gatccaaata	ttaaaataaa	agacagtcac	120
cccaccacta	actaaagtag	tgtttcccac	acttctctat	taagaagcat	gtgagatact	180
tgttacaaac	ataacatcct	ggccccaccc	caaagccact	caatcaaata	ctccagggaa	240
gggatctagg	aattcgtagg	tttaacgagt	gccccaaaat	gattattacc	tggtggagaa	300
tctaggcaac	aatgaattaa	ggaaagctct	ctaccatttg	gtactggtac	cagggttgag	360
gatcacaggg	aagagggtaa	gcataatcaga	ctagcagagc	tgccagaact	cgggctttca	420
aaagagaggt	gccaccctct	cccatgtcca	tgtaagtagc	aaacaaccct	ctcatgtaca	480
ctctgaggaa	caagggggcg	tacttctgtc	gtcttgagcg	tactgatggg	accagcttt	540
tgccccctta	gtgagggtta	attgcgcgct	tggcgtaatc	atggtcatag	ctgtttcctg	600
tgtgaaattg	ttatccgctc	acaattct				628

<210> 63

<211> 627

<212> DNA

<213> Homo Sapien

<220>
 <221> variation
 <222> 191, 214, 263, 271, 277, 303, 325, 333, 363, 418, 528, 570, 596, 614
 <223> N can be any nucleotide

<400> 63
 tgtagctcca aagcagtggg aacaacgcag agtacgccct cttgggttacg taagggaata 60
 gatgatgggg ttcagcatgg ggggtgactac agtgtacatg acagtggcca cacgggtccca 120
 ctctgtcgc gtcgggacgt ggcctggaag tagactgcaa tgactgtcct atagaaagag 180
 gctcaccaca nccaggtggg agccacaggt gggncacaag tcccggagcc tccagaggc 240
 ttgagggcag ctggagcacg ggnaagcttg ntatggnccc acaaggaggc gaggatgagc 300
 agnaaggag tgaccaccac ttgcngcgcc ctnggtgaag atgagcagct tggatgtggt 360
 ggntgtcaga gcacgagagc ctttaagaga ggcttggtgg gtcacagaag aagtggngc 420
 actttgtggg aaagcacaga aaggacaagc gagccatgag caggatatac aggaggagc 480
 tgtccgtggg acaccagcca tgccattcca accagggctg cgcacatngc cggggacatt 540
 ctcggtggat aagggaagg gtgcccgatn ggcacgtatc agtcataggc cttggncgcc 600
 agaagacagc tttnaattta ccccagg 627

<210> 64
 <211> 605
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 5-6, 9, 11, 14, 17, 21-22
 <223> N can be any nucleotide

<400> 64
 gttannccnt ntanctncaa nngaggtaac aacgcagagt acgcccccca tgtatttgct 60
 tcttgcccaa cctgtccttt gtagagatct gctacaccac cgttggtggg cccttgatgc 120
 tttccaacat ttttggggcc cagaagccca ttccattggc tggatgtggg gcccaaagt 180
 tcctctttct cacacttggt ggtgctgact gtttctctt ggcgatcgtg gcctatgacc 240
 gctatgtggc catctgccac cctttgcact acccctcatc atgacctgca gtctgtgctg 300
 gcagatgctg ggcggcgctg tgggcctggc cctcttcttc tccctgcagc tcaccgcctt 360
 aatcttcacc ttgcccttct ggcgtaccg ccaggaaatt aaccacttcc tctgcatgt 420
 acctccgtcc tgcgcctggc ctgcgctgca tccgtgttca ccaggctgcc tctatgtcgt 480
 gagcatcttc gtgctgaccg tccccttctt gctcatctgc gtctcctacg tgttcacac 540
 ctgtgccatc ctgagcatcc gttctgctga gggccggcac caggcctttt caactgctct 600
 tccgg 605

<210> 65
 <211> 609
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 10, 14-15, 19, 22, 67, 603
 <223> N can be any nucleotide

<400> 65
 tgtagctccn aagnngagnt ancaacgcag agtacgcccg cggaatctat agatgaaagg 60
 gtttgngag tcagaagaag gaagtacatg ggagtcataa cagtgtagga caatgatggc 120
 agcttcttgc cctcaggtga attatttgat ttaggccgga agtaggtgag gcttaatgat 180
 atatagaaaa gagagacaac aaggaggtgt gaggaacatg tagaaaaggc tttattcttc 240
 cctttagctg atgggatctt gaggatggca gcagcaatgt gagtatagga acacaagatc 300
 agcaagcggg ggatcatgac caccagaatg gttccgacga tggcgtagat ctcaaagagt 360
 gctgtgtctg cacagaccag cctcagcaca ggtgggctgt cacagaagaa gtggttcacc 420
 ttgttggtgc cacagaatgg aaaactgaag agccatgtgg tctgcacagt agctacagga 480
 aagcctggga accaggaggt agcagccagt ttggcacgag tcctttggtt catgatgact 540

gggtaagtgc aagggactgc agatggccac atagccggtc atatgccatt ggtagcccag 600
gangaagct 609

<210> 66
<211> 617
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 6, 20
<223> N can be any nucleotide

<400> 66
gttatnccctt gttgctcccn agcagaggta acaacgcaga gtacgcccct atttctcaga 60
tatangatga agggggttcag aaaaagaatg agcaaagaaa atctgggcca ggcgggcatc 120
aaaagaaata gtcttggtgct caaccagaaa gtctgcaatc attttagggg tagcagaaga 180
ggcaacacat acgtctataa atgacagggt ggcaagaagc aaatacattg ggggcgtact 240
tctgtcgtct tgagcgtact gatgggtaccc agctttttgtt cccttttagtg agggttaatt 300
gcgcgcttgg cgtaatcatg gtcataagctg tttcctgtgt gaaattgtta tccgctcaca 360
attccacaca acatacgagc cgggagcata aagtgtaaag cctgggggtgc ctaatgagtg 420
agctaactca cattaattgc gttgcgctca ctgcccgctt tcagtcggga aacctgtcgt 480
gccagctgca ttaatgaatc ggccaacgcg ccggggagag gcggtttgcg tattgggcgc 540
tcttccgctt ctgcgtcact gactcgcttg cgctcggtcg ttcggcttgc ggcgagcggt 600
atcaagctca ctcaaat 617

<210> 67
<211> 621
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 10, 17, 28, 277, 286, 370, 373, 422, 513, 527, 536, 545, 548, 550, 558,
563, 566, 572, 574, 579, 583, 603-604, 609, 621
<223> N can be any nucleotide

<400> 67
gggttttacn ctgtgcncct ccagcagngg taacaacgca gagtacgccc ttgttgcgaa 60
gaaataaatg aatgggttta aaatagacgt gaagatggtg tagaatacag caaggacttt 120
gtcaactgag taactgctga agggccacac atagatgaaa atacacgatc caaagaataa 180
agtgaccaca gtgatgtgag cagtcaatgt ggagtgggcc ttcaccatgc ttacagagga 240
gcgattccta actgtaataa gtattacagt gtagganaca accaanagga gaaaggaact 300
cagagaaaga aagccaccat ctgcaactat tagtaggctg acaacataag tgtctatgca 360
ggctaacttn gtngctagag gaaggtcaca gaaaaaaact atctacctta ttaggaccac 420
anaatggcag attaaccgtg aatgccaaact ggctgggtgt atggatgaag cccacaaacc 480
aggaaatgag gacgagcaca acacatacac agnagctcat gattganatg tagtgnggag 540
gtttncntn gctcatancc gtnttngcca tngnaactng gancaccatt ttacttgcag 600
tgnnggagng aacatgaaat n 621

<210> 68
<211> 611
<212> DNA
<213> Homo Sapien

<220>
<221> variation
<222> 5-6, 9-10, 17, 19, 298, 464, 519, 549
<223> N can be any nucleotide

<400> 68
 gttannccnm tttaatnena tggagctcca aagcagtggg aacaacgcag agtacgcccc 60
 cgatgtactt gttcctactc tttgctggat ttgaaaactt cctcctgtcc gtgatggcct 120
 atgaccgggt tgtggccatc tgtcaccccc tgcactacat gggtcattatg aaccctcacc 180
 tctgtggact gctgggttcta gcatcctgga ccatgagtgc tctgtattcc ttgctacaaa 240
 tcttaatggg agtacggctg tcttctgcac agccttagaa atccccact ttttctgnga 300
 acttaatcag gtcacccaac ttgcttggtc tgatagcttt cttaatcaca tgggtgatata 360
 ttttacagtt gcgctgctgg gtggagggtc cctcactggg atcctttact cttactctaa 420
 gataatttct tccatacatg caatctcatc agcttagggg aagnacaagg cattttccac 480
 ctgtgcatct cacctttcag ttgctcctta ttttatggng caatctaggg gtgaccttag 540
 ttttgtctgnc acccgcaact cacacttaag tgcaacaacc tcagtgatgt acactggggg 600
 caccatgc c 611

<210> 69
 <211> 625
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2, 4-6, 11, 15-16, 40, 42, 45, 47, 52, 61, 64-66, 74-75, 77, 80, 586, 618
 <223> N can be any nucleotide

<400> 69
 gngnnncgag nttanncctt ggactcccag tagagctacn angantncgc cnagcgcgca 60
 nttnnnccag ggtntntntn gtatcaccaa tgaatagaaa acagacacca ccttgtccct 120
 gcctagcaag tagctggagc tgggtcgcaa gtacacgaaa agggctgtcc caaacagcag 180
 agtcaccacc atcagatgcg aggcacacgt gttgcaggct ttccatcggc cctctgctga 240
 agggatcttc aggaccgcag acactatgta accataggag ataaggagt ggaggaacga 300
 tgttctctcg acggtgacca ccacgaggaa attcaccact tgactgagga aggtgtcaga 360
 gcaagacaga gccaggactg gtgggagggt gcagaagaag tggttgatga tgttgggtcc 420
 gcaaaagtga agcctaaata tggagctggc ctggatcagg gagctcagga agccaccaac 480
 atatgcccc accaccatgc gtgtacagag gccctgggtc atgatagtg ggatanagaag 540
 ggggctggag atggcttgca tatcggtcgt atgccatagc agtcangagg aggcactcaa 600
 gacagacca tgccgacnaa gaaat 625

<210> 70
 <211> 626
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-5, 17-18, 24, 34, 42, 584
 <223> N can be any nucleotide

<400> 70
 gnnnnnttta cccctgnngc acanagcagt ggtnacaacg cncgagtacg cccctatgt 60
 attttttctt attctggaca cgctactcct gaccgtgatg gcctatgacc ggtttgtggc 120
 tgtctgccac cctctgcaat atatgatcat catgaacccc cacctctgtg gcctcctggg 180
 ttttgtcacc tggctcattg gtgtcatgac atccctcttc catatttctc tgatgatgca 240
 tctaattctt tgtaaagatt ttgaaattcc acatttttct tgcgaactga cgtacatcct 300
 ccagctggcc tgctctgata ccttccctgaa cagcacgttg atatacttta tgacgggtgt 360
 gctggggcgtt ttccctctcc ttgggatcat tttctcttat tcacgaattg cttcatccat 420
 aaggaagatg tctcatctg ggggaaaaca aatagcactt tccacctgtg ggtctcacct 480
 ctccgtcgtt tctttatttt atgggacagg cattggggtc cacttcactt ctgcgggtgac 540
 tcaccttcc cagaaaatct ccgtggcctc ggtgatgtca ctgnggtcac ccccatgttg 600
 accctttcat ttacacctt agcaag 626

<210> 71

<211> 633
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-10, 4, 7, 10-11, 33, 35, 39, 50, 57, 60, 61-62, 65, 84-85, 441, 615, 617, 632
 <223> N can be any nucleotide

<400> 71
 gnnnnnnnnnnn gttnatnccn nttttaatgc cantngagnt aacaacgcan gagtacnccn 60
 nngngtacgc ccagggttca accnntgaat agaaaacaga caccaccttg tccctgccta 120
 gcaagtagct ggagctgggt cgcaagtaca cgaaaagggc tgtcccaaac agcagagtca 180
 ccaccatcag atgcgaggca cacgtgttgc aggccttcca tcgccctctg ctgaagggat 240
 cttcaggacc gcagacacta tgtaaccata ggagataagg agttggagga acgatgttcc 300
 tccgacgggtg accaccacga ggaaattcac cacttgactg aggaagggtg cagagcaaga 360
 cagagccagg actggtgggg aggttgcaag aagaagtggg tgatgattgt tgggtcccgc 420
 aaaagtgaata gcctaaatat ngagctggcc tggatcaggg gagctcagga agccacaaca 480
 tatgccccaa ccaccatgctg tgtacagagg ccctgggtca tgatagtggg ggtngagaag 540
 ggggcctgga gatggctgca tatcggtcgt tgccatagca agtcaggagg aggcacttca 600
 gacagaccca tgccncnaag aaaaaaaact gnc 633

<210> 72
 <211> 614
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 2-11, 14-17, 19-20, 22, 28, 42-43, 45, 51, 76, 82-83, 85, 101, 106, 110, 112-114, 117, 119, 135, 139, 434, 507, 520, 614
 <223> N can be any nucleotide

<400> 72
 gnnnnnnnnnnn nttnnnnccn tnactccngc agtggttaaca annantacgc ncagcgcgca 60
 gttaaccctc actaanggta anntnagctg gaacacatca ntacgntcan gnnngcncna 120
 tgaccggttt gtggncatnt gtcacccctt gcactacatg ggtcattatg aaccctcacc 180
 tctgtggact gctggttcta gcatcctgga ccatgagtgc tctgtattcc ttgctacaaa 240
 tcttaatggg agtacggctg tccttctgca cagccttaga aatccccac tttttctgtg 300
 aacttaatca ggcattccaa ttgcttggtc tgatagcttt cttaatcaca tgggtgatata 360
 ttttacaggt tgcgctgctg ggtggaggtc ccctgactgg gatcctttac tcttactcta 420
 aagataattt cttncatata tgcaatctca tcagctcaag gggaagtcaa ggcatttttc 480
 acctgtgcat ctacccctca gttgtcncct attttatggn gcaatcctag ggggtgacctt 540
 agttctggtg gcacccgcaa ctacactcaa tgcacaagct cagtgatgta cactgtggca 600
 cccatgctga accn 614

<210> 73
 <211> 630
 <212> DNA
 <213> Homo Sapien

<220>
 <221> variation
 <222> 3-6, 8-10, 17, 124, 144, 146, 173, 184, 193, 212, 220, 266, 274, 276, 288, 306, 419, 423, 448, 474, 485, 500, 552, 555, 576, 588, 591, 606
 <223> N can be any nucleotide

<400> 73
 gtnnnnnnnnnn ttgattncca ttggagctcc aaagcagtgg taacaacgca gagtacgccc 60
 cctatgtatt ttttcctatt ctggacacgc tactcctgac cgggatggcc tatgaccggg 120

ttngggctgg	ctgccaccct	ctgnantata	tgatcatcat	gaacccccac	ctntgtggcc	180
tcnnggtttt	tgncacctgg	ctcattgggtg	tnatgacatn	cctcctccat	atttctctga	240
tgatgcatct	aatcttctgt	aaagantttg	aaantncaca	ttttttntg	cgaactgacg	300
tacatnctcc	agctggcctg	ctctgatacc	ttcctgaaca	gcacgttgat	atactttatg	360
acgggtgtgc	tgggcgtttt	tccctccttg	ggatcatttt	cttcttattc	acgaattgnt	420
ttnatccata	aggaagaatg	tcctcatntg	ggggaaaaca	aataagcact	tttncacctg	480
tgggnctcaa	cctcttccgn	cgtttcttta	ttttatgggg	acaggcattt	gggggtccac	540
tttacttttt	gnggngactc	accccttcca	gaaaantttc	cgtgggcntc	ngggatgtac	600
actggnngca	cccccatgtt	gaaccctttt				630

<210> 74

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3,12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 74

ccnatgtayt tntccta

18

<210> 75

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 75

ccnatgtayt tntcctc

18

<210> 76

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 76

ccnatgtayt tntcctg

18

<210> 77
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 77
ccnatgtayt tntctcctt

18

<210> 78
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 78
ccnatgtayt tntctctta

18

<210> 79
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 79
ccnatgtayt tntctcttc

18

<210> 80
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 80

ccnatgtayt tntctcttg

18

<210> 81

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 81

ccnatgtayt tntctcttt

18

<210> 82

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 82

ccnatgtayt tntcttcta

18

<210> 83

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 83

ccnatgtayt tntcttctc

18

<210> 84
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 84
ccnatgtayt tncttctg

18

<210> 85
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 85
ccnatgtayt tncttctt

18

<210> 86
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 86
ccnatgtayt tnctttta

18

<210> 87
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 87
ccnatgtayt tnccttttc 18

<210> 88
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 88
ccnatgtayt tnccttttg 18

<210> 89
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 89
ccnatgtayt tnccttttt 18

<210> 90
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 90
ccnatgtayt tnttccta 18

<210> 91
<211> 18
<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 91

ccnatgtayt tnttcctc

18

<210> 92

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 92

ccnatgtayt tnttcctg

18

<210> 93

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 93

ccnatgtayt tnttcctt

18

<210> 94

<211> 18

<212> DNA

<213> Unknown: Synthetic construct

<220>

<221> variation

<222> 3, 12

<223> N can be any nucleotide

<221> variation

<222> 9

<223> y = t/u or c

<400> 94
ccnatgtayt tnttctta 18

<210> 95
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 95
ccnatgtayt tnttcttc 18

<210> 96
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 96
ccnatgtayt tnttcttg 18

<210> 97
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 97
ccnatgtayt tnttcttt 18

<210> 98
<211> 18

<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 98
ccnatgtayt tntttcta

18

<210> 99
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 99
ccnatgtayt tntttctc

18

<210> 100
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 100
ccnatgtayt tntttctg

18

<210> 101
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 101
ccnatgtayt tntttctt

18

<210> 102
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 102
ccnatgtayt tnttttta

18

<210> 103
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 103
ccnatgtayt tntttttc

18

<210> 104
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<400> 104
ccnatgtayt tntttttg

18

<210> 105
<211> 18
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 12
<223> N can be any nucleotide

<221> variation
<222> 9
<223> y = t/u or c

<210> 106
<211> 31
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 4, 7, 10, 13, 20, 23, 26
<223> N can be any nucleotide

<220>
<221> variation
<222> 1, 2, 8, 12, 15
<223> y = t or c

<220>
<221> variation
<222> 11, 29
<223> r = a or g

<400> 106
yytngtnytn ryncygatan atnatnggrt t

31

<210> 107
<211> 28
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 6, 9, 12, 17, 23
<223> N can be any nucleotide

<220>
<221> variation
<222> 1
<223> y = t or c

<220>
<221> variation
<222> 3, 14, 20, 26
<223> r = a or g

<220>
<221> variation
<222> 8
<223> k = t or g

<220>
<221> variation
<222> 13
<223> w = t or a

<400> 107
ytrttncna gnwrtanatr aanggrtt

28

<210> 108
<211> 32
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 9, 12, 15, 21, 24, 27
<223> N can be any nucleotide

<220>
<221> variation
<222> 3, 23
<223> y = t or c

<220>
<221> variation
<222> 6, 18, 30
<223> r = a or g

<220>
<221> variation
<222> 11
<223> k = t or g

<220>
<221> variation
<222> 17
<223> w = t or a

<220>
<221> variation
<222> 26
<223> s = g or c

<400> 108
tcytrttnc knagngwrtataynasnggr tt

32

<210> 109
<211> 32
<212> DNA
<213> Unknown: Synthetic construct

<220>
<221> variation
<222> 3, 9, 12, 15, 21, 24, 27
<223> N can be any nucleotide

<220>
<221> variation
<222> 6, 14, 18, 30
<223> r = a or g

<220>
 <221> variation
 <222> 11
 <223> k = t or g

<220>
 <221> variation
 <222> 5, 16
 <223> s = g or c

<400> 109
 tcntsrttnc knarnsarta natnatnggr tt

32

<210> 110
 <211> 27
 <212> DNA
 <213> Unknown: Synthetic construct

<220>
 <221> variation
 <222> 4, 7, 10, 16, 22
 <223> N can be any nucleotide

<220>
 <221> variation
 <222> 1, 9, 13, 19, 25
 <223> r = a or g

<220>
 <221> variation
 <222> 6
 <223> k = t or g

<220>
 <221> variation
 <222> 12
 <223> w = t or a

<220>
 <221> variation
 <222> 11
 <223> s = g or c

<400> 110
 rttncnarn swrtanatra anggrtt

27

<210> 111
 <211> 886
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 7, 11, 16, 18, 21, 209, 231, 258, 259, 266, 267, 269, 282, 287, 289,
 301, 308, 314, 315, 316, 319, 321, 325, 329, 337, 338, 339, 346, 368, 383,
 385, 393, 398, 412, 413, 416, 417, 420, 439, 440, 442, 447, 453, 459, 474,
 479, 484, 488, 499, 508, 513, 521, 526, 536, 541, 549, 559, 574, 579, 587,
 590, 596, 597, 601, 602, 610, 618, 622, 633, 635, 648, 649, 650, 652, 654,

661, 666, 688, 690, 692, 698, 705, 713, 720, 724, 726, 731, 732, 736, 771, 788, 790, 795, 801, 802, 807, 811, 817, 829, 836, 840, 846, 849, 850, 855, 859, 870, 872, 874, 877, 878, 886

<223> n = any nucleotide

<400> 111

```

gggtccntcg ngatatnctt naccctctga tgctgctcga gcggccggca gggatgatga 60
tatctgcaga attcgccctt ctgttacgca ggaatatata aaggggttac tgaggaataa 120
ataaatgggt tactgaggaa taaataaatg ggttactgag gaacaaatac atagggttga 180
aagaactgta aaatagaaaa aggaccttnt gctgctcctc aggatggcgg nacttagggg 240
ccatgtacat gacgatgnng ctgccnntna agagtccac tntcancng cctcagcccg 300
ncttttttct cactnnccnt ntttntctnc cctctnnnc tcttttcttc ctattcccc 360
ccctccnct cctccctttt gcntnaccat tgnccctnat ccctttaatt cnntcnntcn 420
tctccctctt attccttcnn tnttcgnctt cantctctnc ctctttctcc cccnctttct 480
ctctctnct ctctctctng tcactctngt tctttctctt ncttanttcc ctctancctt 540
ntcttattnc tctctatnc cctctcatct cactctctnt cctctctntcn tactttnctc 600
nctcttccn ctcgtctnc ccttttctct tcntnacgcc accctctnnn cntnctctct 660
ntctctctct cactctctcc tctccctnct cntcactntt ctcnccctct acntcctatn 720
ctcnctttct nctttnactt tgtaacgctc tctctctctt ctctacgcac nttttatctc 780
ttatctcnct catnccctc nttctnctc nctattnact cttttctcnc atactntatn 840
ctctntctnn cttanctcnc ctccctctctn tnancnntc actgcn 886

```

<210> 112

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 13, 31, 36-37, 40, 45-48, 50, 53-54, 61, 63, 67-68, 70, 473, 512, 523, 526, 535, 542-543, 545, 549, 558, 566, 571, 582, 589, 593-594, 603, 612-614, 616, 621, 623-624

<223> n = any nucleotide

<400> 112

```

gctgctcagc cgncgcagcg tcggcagtggt naggggnatn tgccnnnnntn gcnnttagat 60
nanaggnntn agtatggggg tgaccacagt ggtacataac tgaggctgtt gcacttgagt 120
gtgagttgag ggtggcagca gaactaaggt acacccttag gattgcacca taaaataagg 180
agacaactga gaggtgagat gcacaggtgg aaaatgcctt gtacttcccc tgagctgatg 240
agattgcatg tatggaagaa attatcttag agtaagagta aaggatccca gtcaggggac 300
ctccacccag cagcgcaact gtaaaatata tcaccatgtg attaagaaag ctatcagaac 360
aagcaagttg gatgacctga ttaagttcac agaaaaagtg ggggatttct aaggctgtgc 420
agaaggacag ccgtactacc attagatttt gttagcaagga atacagagca ctatggtcc 480
aggatgccag aaccagcagt cacagagggt gngggtttca tantgnccct gtagngtcag 540
cnnngacna gatggcncna aaccgntctt nggccctcac gnccctggna ggnngttttc 600
tantccacca cnnnttttct nannc 625

```

<210> 113

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 6-7, 30, 113, 128, 137, 142, 150, 157, 174, 297, 310, 313, 335, 354, 356, 377, 382, 385, 389, 393, 421, 429, 431, 433, 435, 438, 440, 442-443, 446, 455, 457, 465, 467, 477, 488, 491, 501-502, 504, 508-509, 515, 522, 525-526, 529-530, 542, 557-559, 561, 564, 565, 568, 577, 579-581, 584, 587-589, 591, 596-603, 607-610, 612-613

<223> n = any nucleotide

<400> 113

```
catgcnnagag caggctcgag cgccggcagn gtgagggata tctgcagaat tcgcccttcc 60
tatgtacttt ttcttgagcg tatacacaat cccatcatgt actggggaga agncagacca 120
tatcattnac aagctgnctt tngcagatgn actttgnttt ctcattaggc tgcncagagt 180
acttctctct ggcagccatg gcttatgacc gctgtcttgc catctgctat cctttacact 240
acggagccat catgagtagc ctgctctcag cgcagctggc cctgggctcc tgggtgngtg 300
gtttcgcgcn cantgcagcg cccacagccc tcagnagcgg tcttgctctt ctgngncccc 360
cgtgccatta accactnctt tngcngcant gcnccttgca ttgtcttgc ctgccacca 420
nacagcagna nancntgngn cnnttngatc gctgntnecg tctcngntct cactccttc 480
cacctttnc ntegcattcc nntntcenn tcgncctct gncnntcnn tctcctcttc 540
tnaacgcgtc ctccgannng nctnnatgnt cgtctctnn ntgngcnng ncagcnnnnn 600
nnccannnn tngtgccgc gctcc 625
```

<210> 114

<211> 651

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 12-13, 20, 23, 188, 375, 399, 402, 416, 443, 460, 472, 474-475, 480, 484, 487-488, 502, 505, 522-523, 529, 532, 537-538, 546, 553, 555, 557, 561, 564-565, 573, 575, 577, 581, 583, 586, 591, 594, 617, 634, 636, 643

<223> n = any nucleotide

<400> 114

```
gnttaagccc tnnccctctn gangcatgct cgagcggccg ccagtgtgat ggatatctgc 60
agaattcgcc cttgttccgc aaacaataga tgaaaggatt aagtgaagga gtgccaccg 120
catagaagag accaaagaac ttgccctcc cttgggcata cggatttttg ggctggaggt 180
agacagcnat gactgagctg tagaagaggg tgaccacagt gagatgggag gagcaggtcc 240
caaaggcctt tctccatgct gtggcagagt taatcctcag cactgcctgg gcagtggctc 300
cataagaggc aaggatgagg ctgagaggca caaccacgaa gatgacactg gacacagcca 360
actggatttc attgnaggag gcattctccac aggagagtnc gnatcagaga tgggancctc 420
acataaaaaa gtcattctatc tgntgggtggg gacagaatgn ccatgtggag gntnnatgtn 480
cgtntcnnac ctcttatttt tnttccccct ttctttcgtc cnntccccnt tntcccnct 540
cgccanttcc atncnctnt ntcnnttttt ttntntnacc ntntntcat ntentctctt 600
tattctcttt ctcttgntc tcccttctct ctentnttcc canctctccc g 651
```

<210> 115

<211> 850

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 3, 15, 279, 288, 292, 295, 296, 299, 307, 309, 317-319, 322, 326-327, 329, 335, 340, 343, 345-346, 354, 362, 367-368, 377, 380-382, 386, 391, 394, 396, 399-400, 410, 412, 415-416, 418, 433, 436, 442, 444, 451, 455, 466, 468-469, 471, 474, 482, 488, 490, 500, 505, 514, 516, 522, 530, 537, 548, 550, 552, 559, 562-565, 569, 570, 571-573, 576, 581, 592, 597, 603, 605-606, 608, 617, 619, 624, 627, 630, 635-636, 643, 647, 653, 661-663, 667, 673-675, 678, 690, 697-698, 709-711, 720, 724, 727, 731, 736, 746, 760, 768, 771, 783-784, 789, 791, 794, 796, 797, 800-801, 808, 810, 816, 818, 821-822, 832, 836

<223> n = any nucleotide

<400> 115

```
ggntctcggg acaanacttg gccctctaga tgcattgctc agcggccgcc agtgtgatgg 60
```



```

atatctgcag aattecgcct tccaatgtat ttattcctgt tatttggaga cctggagagc 120
ttcctccttg tggccatggc ctatgaccgc tatgtggcca tctgcttccc cctgcactac 180
accgccatca tgagcccat gctctgtctc gccctgggtg cgctgacctg ggtgctgacc 240
accttccatg ccatgttaca cactttactc atggccagnt tgtgcttntg tncennacna 300
ttgttgntnc ccactnnnc tntgtntna gtctnctctn centnnactg ctctctctct 360
tntccnnga gtccctnggn nncgtngctg nttncngcnn tcaattgcan tncennctc 420
atcctttctt tanttntcca tntnttcaat nattnctctt tatccnctnt ntccctctc 480
anctcctnct tagcttactn tttctgtctc tccngngctc anccctttct ccatatnttc 540
ttctctcctn tntctctcnc tnnncccn nntctctctg ntctctgctc cntcttnacg 600
tctnnctctt tatttantnt ctccnctctn tctcnngctc cancgngta ccngccctat 660
nnctctctc ganntgtnt atggcatctn cacatnngc cctactatnn ncgatctatn 720
ttcncgncat ntattncaca tccacntgca ctctactctn ctctctance nccgtacatc 780
gcnctacng ntgncnctn nccgtctctn cggccnctat nntccactt tntctnggtc 840
ccccctctcg                                     850

```

<210> 116

<211> 620

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 451, 479, 501, 533, 542, 550, 553, 561, 572, 582, 585, 600, 604-605

<223> n = any nucleotide

<400> 116

```

gatgcctgct cgagcgcccg cagtgtgatg gatatctgca gaattcgccc ttccaatgta 60
ctttttcctg aagaacctct ctgttttgga tctgtgctac atctcagtea ctgtgcctaa 120
atccatccgt aactccctga ctgcagaag ctccatctct tatcttggtg gtgtggctca 180
agcctatttt ttctctgctt ttgcatctgc tgagctggcc ttccttactg tcatgtctta 240
tgaccgctat gttgccattt gccacccctt ccaatacaga gccgtgatga catcaggagg 300
gtgctatcag atggcagtea ccacctggct aagctgcttt tctacgcag ccgtccacac 360
tggaacatg ttccgggagc acgtttgcag atccaatgtg atccaccagt tcttccgtga 420
catccctcag gtgttggtcc tggtttctct ngagggtttt tttgtagagc tttgaccng 480
ccctgagcct caatgcttgg ntctgggatg ctttatccct atgatgatct ccnattttcc 540
anatctctn aanggggctc nagaatccct tnaggaccag antcnagcta aaagcctttt 600
ccnctgct tccccccacg                                     620

```

<210> 117

<211> 628

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 5, 9, 403, 505, 552

<223> n = any nucleotide

<400> 117

```

tggcnctcng atgcattgct gagcgggcgc cagtgtgatg gatatctgca gaattcgccc 60
ttccaatgta tttgttctct ttatttggag acctggagag ctctctctct gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc ccctgacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggt gcgctgtcct ggggtgctgac cacttccac gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tegagttaat gaatgggtga 360
tatttatcat gggagggtct attcttgcac cccattccta ctnatccttg ggtcctatgc 420
aagaattgtc tctccatcc tcaaggctcc ttcttctaag ggtatctgca aggccttctc 480
tacttgtggc tcccaccctg tctgnggtgt cactggttct atggaaccgt tattggtctc 540
tacttatgct cntcagctaa tagttctact ctaaaggaca ctgcatggct atgatgtaca 600

```

ctgtggtgac ccccatgctg aaccctt

628

<210> 118
 <211> 783
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 17, 25, 184, 187-188, 199, 202, 206, 212, 214-215, 223, 227-228, 232, 248, 250, 252-253, 255-256, 261-264, 266, 268, 271, 273, 276, 278, 284, 289, 292, 295-296, 298, 300-302, 306, 310, 315-316, 320-322, 325, 329, 333, 337, 340-341, 346, 349, 355, 369, 371, 373-374, 379-380, 383-384, 387-388, 391, 402, 407, 409, 417, 419-420, 436-437, 441-442, 445, 447-448, 450, 456-458, 461, 469, 472, 477-479, 486-487, 490, 493, 503, 510, 512, 517, 530, 540, 542, 544, 552-553, 565, 572, 587, 595, 597-598, 600, 611, 614, 617-618, 622-623, 625, 634-636, 639, 644-645, 646, 652-653, 663, 665, 668, 673-674, 679, 681, 683, 695-696, 699, 706, 710, 712, 716, 725-726, 731-732, 741, 745, 748-750, 763, 771, 774, 776, 772, 774-775, 777-778, 780, 782

<223> n = any nucleotide

<400> 118

```

gatgatgctc gagcggnccg agtgngatgg atatctgcag aattcgccct tcccatgtat 60
ttgttccctga gcaacctctc ctctctggag atttggtata ccacagcagc agtgcccaaa 120
gcactggcca tctactggg gagagacag accatatcat ttacaagctg ccttttgtag 180
atgnacnntg ttttctcant angccntaca gngnncatgt ttncgcnngc cntgacttat 240
gacgcgcntn cncnntatc nnnntntnct ntacnncac ttctcatna tntgnntn 300
nnttcnctn tggcnctcn nntcnegnc ttncctntgn ncgtctcnc ccttnggect 360
gcattctctc ntntcctnn ccnncgnct ntcttctct cntacctnt ttctgtntnn 420
tccctccct ctctgnntgc nctnncnnc catctnnntg ntctgatnc tntctnnnt 480
ccatcnngtn ctntctctc gtntctctc cncgcncct gcattcactgn gcattatn 540
cncgtctca tnnctatctt cgtntctgt ccttctctc ctatgcncga cgtctntn 600
tactatcgtc ntctcnntat tnnngcctgt tcnngcnc ccgncntcc anntactctc 660
cangntctc ctntctctn ncctgtctc attcncntn accgntctn gntctctc 720
cgctnntccc ncttctctc nctcnngnn cnttcagct ntcnnttct antnngnncn 780
cnc 783

```

<210> 119
 <211> 674
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 1, 2, 114, 207, 212, 253, 261, 294, 316-317, 325, 327-329, 333-334, 340, 345, 352, 355, 364, 382, 384, 393-394, 397, 414, 418, 424, 426, 431, 440, 447, 449, 452, 455, 462, 467, 474, 482, 486, 492-493, 496, 500, 503, 509, 516, 519-520, 525, 532, 534, 539, 544, 550, 552, 555, 559, 564, 566, 573, 576, 586, 591, 594, 598, 605, 608, 610-611, 618, 626, 629, 635, 638, 644, 660-661, 666, 669

<223> n = any nucleotide

<400> 119

```

nntagatgca tgctcgagcg gcccgccagt gtgatggata tctgcagaat tcgcccctcc 60
tatgtatttc ttctggcca acctgtcctt ctggagacc tggtagatct ctgngactgt 120
gcccaggtta ctgtttagtt tttggtctgc gaacaacagc atctctttca cactctgtat 180
gatacaactg tacttcttca ttgctcncat gngcacagaa tgcgtgcttc tggccgcat 240
ggcctatgac cgntatgtgg ncattctggc cccactccac tacccaacca taantgagcc 300
atgggctcct gctcnnct cgtntnnna tanngaaccn acagngtagc gncanctccc 360

```

```

tgtncgagaa tctacttcat cntnctgcct tannttntgt gggcccaatg tgcntaanca 420
cttngntctg nggacatttn ctccagnant tnaantctct tnetgcnaca aganactgtt 480
cnttancttg annatnttcn ggnacattnt tcctanggnn ttggcnacgag cntntctanc 540
accngcactn cncantaant gctncngttc tantcngtgc cattcntgtg nctncecntt 600
tcatingcntn ncctcccneg aaagcnaant aagtnggngt cttnactttc gccccccacn 660
ncatncant ggcc 674

```

<210> 120

<211> 643

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 359, 373, 439, 463, 506, 537, 564, 584, 594, 604, 610, 620, 633-634, 636

<223> n = any nucleotide

<400> 120

```

ggccctctag atgcatgctc gagcgggcgc cagtgtgatg gatattctgca gaattcgccc 60
ttcctatgta ttttttcctg ttatttggag acctggagag cctcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtng 360
atatttatca tngaggggct cattcttgct atccattcc tactcatcct tgggtcctat 420
gcgagaattg tctcctccnt cctcaaagge cccttcttct aanggggtatc tgcaaggcct 480
tctctacttg gtggctcccc ccctgncgtgt ggtgtcactg ttccatttgg aaaccgntat 540
tggaactcta cttatgctca tcangctaata agttttactc ttangggaca ctgncaatgg 600
cctntgaagn tacccttggg gtggaccccc atnntngaac ccc 643

```

<210> 121

<211> 657

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 429, 447, 453, 484, 510, 519, 542, 544, 546, 549, 552, 561, 581, 587, 600-601, 613, 618, 620-621, 623, 632, 643, 655-656

<223> n = any nucleotide

<400> 121

```

ggccctctag atgcatgctc gagcgggcgc cagtgtgatg gatattctgca gaattcgccc 60
ttccaatgta ctttttcctg ttatttggag acctggagag cttcctcctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgtc tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggaggggctc attcttgcac cccattccta ctcatccttg ggtcctatgc 420
aagaattgnc tccttccatc tcaaggncce ttnttctaaa ggggtatctgc aaggccttct 480
ctanttggtg ctcccaccct gtcttgtggn tggcactgnt tctaattggga accggttaatt 540
gnanencntna cnttatgctc natcaactta aatagtttct nactttnaaa gggaccactn 600
ntcattggct tanggatngn ncnttggttt cntggaaatc ccatcatc ttacnng 657

```

<210> 122

<211> 622

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 9, 536, 543, 587, 609, 616, 619, 621-622

<223> n = any nucleotide

<400> 122

```

atgaccctna gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc 60
cttccaatgt atttgttctt gtccaacctg tccttttttg atattggctt tatctctaca 120
ataattccca atatgctaga tcatatttag tcaggaatta agctgatttc ttatggggag 180
tgtctgacac aactctattt ctctggccta tttgcagatc tggacaacaa ctttctcctg 240
gctgtgttgg cccttgaccg ctatgtggcc atcagccatc ctctccatta tgccctaacc 300
atgaactccc aacgctgtgt cctgttggtg gctgtgtcat ggggtgatcac tattttacat 360
gccctagtgc ataccctctt agtgaccagg ctttcttctt gtggtccaaa tattatccct 420
cacttcttct gtgactctggc cccactcctg aagctggcct gctccagtac ttgtgtcaat 480
gatctgggtg tcatccttgg ggcaggaaca ctgctgaatg cgccctttgc tgcattctta 540
tgnccactct ttacattgca ttggccatcc tgagaattga ttcccnagg ggtatgcaaa 600
gggcccttnt ccagctcnc nn                                     622

```

<210> 123

<211> 610

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 4, 445, 568-569, 580, 587, 600, 607, 610

<223> n = any nucleotide

<400> 123

```

gcgncgcagt gtgatggata tctgcagaat tcgcccttcc aatgtatttg tttctgttat 60
ttggagacct ggagagcttc ctcttgttgg ccatggccta tgaccgctat gtggccatct 120
gcttccccct gcactacacc gccatcatga gcccctgct ctgtctcgcc ctggtggcgc 180
tgtcctgggt gctgaccacc ttccatgcca tgttacacac tttactcatg gccagggtgt 240
gtttttgtgc agacaatgtg atccccact ttttctgtga tatgtctgct ctgctgaagc 300
tggccttctc tgacactcga gttaatgaat ggggtgatatt tatcatggga gggctcatc 360
ttgtcatccc attcctactc atccttgggt cctatgcaag aattgtctcc tccatcctca 420
aggctccctc ttctaagggg atctngcaag gccttctcta cttgcggctc cacctgcctg 480
tggtgtcact gttctatgga accgttattg gtctctactt atgctcatca gccataaagt 540
tttactctaa aaggacactt gtcatggmnt atgatgtacn ctgtggngac ccccatgctn 600
aaccctnttn                                     610

```

<210> 124

<211> 660

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 469, 477, 482, 484, 493, 500, 509, 524, 527, 530, 536, 542, 549, 553-555, 561, 571, 580, 581, 583, 591, 597, 602, 609, 617-619, 624-625, 627, 636, 638, 642, 645-646

<223> n = any nucleotide

<400> 124

```

ccttgggccc tctagatgca tgctcgagcg gccgccagtg tgatggatat ctgcagaatt 60

```

```

cgcccttctt tattcctgag tgaatatatg aggggggttg cactgctgtt aagagtggac 120
aggaaaatgg aaactagacg aacgtgacaa atccacgtgg atccagaaaa ataggaatca 180
ctgaatgcca aagggcaggt cacagaggag gaagaccagc actctgagca ggatgggtcat 240
gtacagcctg gtcaagggca tcttcggga tccacaaagg atcctgacca gcagaaccgg 300
gctggaccgg cagagaacca cacataaaaa aatcagccat gtgactgtga tgaaatctga 360
tgtttcacac caaacagaat caagcaccac tagacaggaa gccacagaac atccattcca 420
ggatgctctg cagcagggac agggcccaga gcaggacaca cgactgctna ccaggtnntt 480
tngngtggct cgnagctctn cttaggtatng tccccaaagg ttgnc'cnggn ccggtntctt 540
gnttgcttnt cgnnncccta nctatgcctt ngctcctgtn nangcttgac nattggncct 600
cncccacgng gcttaannnt ctcnngncgc atttanancg tnatntact tcccttgctg 660

```

<210> 125

<211> 632

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 2, 488, 505, 507, 586, 618

<223> n = any nucleotide

<400> 125

```

gnccctctag atgcatgctc gagcgggcgc cagtgtgatg gatattctgca gaattcgccc 60
ttcctatgta cttcttctctg ttatttggag acctggagag cttctctctt gtggccatgg 120
cctatgaccg ctatgtggcc atctgcttcc cctgcacta caccgccatc atgagcccca 180
tgctctgtct cgccctgggtg gcgctgtcct ggggtgctgac caccttccat gccatgttac 240
acactttact catggccagg ttgtgttttt gtgcagacaa tgtgatcccc cactttttct 300
gtgatatgct tgctctgctg aagctggcct tctctgacac tcgagttaat gaatgggtga 360
tatttatcat gggagggctc attcttgtea tcccattcct actcatcctt gggtcctatg 420
caagaattgt ctctccatc ctcaaggctc cttcttctaa gggatatctgc aaggccttct 480
ctacttgngg ctcccacctg tcttngngg cactgttcta tgggaaccgg tattggtctc 540
tacttaatgc tcatcaagct aatagttcta ctctaaagga cactgncatg gctatgatgt 600
acactgtggt gaccccnat gctgacctat tc 632

```

<210> 126

<211> 642

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 331, 422, 435, 441, 462, 467-468, 471, 479, 500, 502, 513, 521, 537, 543-545, 549, 551, 563, 565-566, 569, 577, 582-583, 586, 594, 596, 611, 614, 620, 624, 631, 639-640

<223> n = any nucleotide

<400> 126

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tctagatgca tgctcgagcg gccgcagtgt gatggatata tgcagaattc gcccttccaa 60
tgtacttggt cctggcagcc atggcttatg accgctgtct tgccatctgc tatectttac 120
actacggagc catcatgagt agcctgctct cagcgcagct ggccctgggc tcttgggtgt 180
gtgggttctg ggccattgca gtgcccacag cctcatcag tggcctgtcc ttctgtggcc 240
cccgtgccat caaccattc ttctgtgaca ttgcacctg gattgccctg gcctgcacca 300
acacacaggc agtagagctt gtggcctttg ngattgctgg tgtggttata ctgagttcat 360
gcctcatcac ctttgtctcc tatgtggaca catcagcac catccttcag gatccccctt 420
gncagtcccc ggagnaag ncttttccac gtgctcctcg cntctcnncg nggtgctcna 480
tttgggtatg gtccacaagn tnttctttca cgnccggatt ntccattcaa aagatgncct 540
tgnnttttna ncaaaagctt ggncnncgnc ctgaaanact gnngtngact tcangnttta 600
aaactccttt natntcactn ttanggggaac naggggcnac ac 642

```

<210> 127
 <211> 688
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 1, 4, 54, 154, 269, 284, 294, 327, 339, 342, 344, 360, 362, 366, 372-373, 379, 382, 390, 393, 395, 397, 402, 408, 410-411, 417, 425, 428, 433, 435, 442, 446-448, 456, 461, 468, 473, 476, 479, 485, 487, 489, 508-509, 514-515, 526, 532-533, 535, 537, 539, 547, 550-551, 553, 555, 559, 572, 578, 582, 587, 595, 597, 602-603, 609-613, 617, 619, 621, 630, 634, 636, 640, 650, 652, 660, 679, 681, 683-684
 <223> n = any nucleotide

<400> 127
 ntngnccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcangaattc 60
 gcccttccca tgtatttatt ccttagcctg ttggattccc agctgcacag ctggattgtg 120
 ttacacaact caccttcttc aagaatgtgg aaanctataa ttttttttct gtgacccatc 180
 tcaacttctc aaccttgccct gttctgacag catcatcaat aacatattat gtattttaga 240
 tateccata tttggttttc ttcccattnc agggatcctt ttgncttacc atanaattgt 300
 cctcctccat tccaagaatt ccattgncag acgggacgna tnangccttc tctacctgtn 360
 cntctnacc gnnagtcgnt tntttatctn tgnantnccc tngggcgncn nccctgncct 420
 cagcnttngt cancnttctc cncacnnntt cgtegnrtgt ncccagtnct gtncntctnc 480
 tctcntnnc tttctgctc cctccannng tctnncttct tcagncctt tnnngncnt 540
 gccagncnc nangntcnc cctctcctc cntgtctnct cctcctntt ctntntncc 600
 tnnctcatnn nnnegncnc ncgctctcnc cccntntctn tacgactcnc gncgtctctn 660
 cgctacgac ctccctgtnc ncnncgg 688

<210> 128
 <211> 619
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 10, 46, 60, 322, 365-366, 464, 472, 475, 482, 493, 498, 498, 504, 517, 535, 543, 547, 556, 564, 584, 590, 600, 602, 610
 <223> n = any nucleotide

<400> 128
 gcgtgctgcn agcggggcgg cagagtgcgc ggatatctgc agaatncgcc cttccgatgn 60
 atttctttct aagcaactta tctttcattg acatctgcta ctcttctgct gtggctccca 120
 atatgctcac tgacttcttc tgggagcaga agaccatata atttgtgggc tgtgctgctc 180
 agtttttttt ctttgtcggc atgggtctgt ctgagtgcct cctcctgact gctatggcat 240
 acgaccgata tgcagccatc tccagcccc ttctctaccc cactatcatg acccagggcc 300
 tctgtacacg catggtggtt gnggcataatg ttggtggctt cctgagctcc ctgatccagg 360
 ccagnnccat atttaggctt cacttttgcg gacccaacat catcaaccac ttcttctgcg 420
 acctccacca gtctggctc tgtcttgctc tgacaccttc cttnagtcaa gncgncgaat 480
 tntcccgtag tgntacntg tcgngaggaa acatcgnttt cctccaaccc ctantctcc 540
 canggnac catagnctc gcgngtcct gaagaatcct tttngccaan cgggcgaatn 600
 gnaagccctn ccaccgccc 619

<210> 129
 <211> 697
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 17, 223, 238, 260, 304, 310, 315, 317, 322, 325, 327, 329, 341, 345-347, 350, 351, 356, 361, 369, 373-374, 378, 386, 391, 394, 396, 403, 414, 416, 426, 447-448, 456, 459, 461-462, 469, 473, 475, 477, 482, 488, 493-495, 504, 508, 511, 515, 518, 523, 527, 532-533, 537, 543, 548, 555, 558, 561, 570-571, 578, 580, 587-588, 592, 598-599, 601-602, 606, 608, 613, 619, 622-623, 634-635, 645, 648, 656, 658, 661, 665, 674-675, 682, 685, 687, 694-695

<223> n = any nucleotide

<400> 129

```

gcggcgcagt gtgatgntat ctgacgaatt cgcccttccg atgtatttat ttctaagcaa 60
cttatctttc attgacatct gctactcttc tgctgtggct cccaatatgc tcaactgactt 120
cttctgggag cagaagacca tatcatttgt gggctgtgct gctcagtttt ttttctttgt 180
cggcattgggt ctgtctgagt gctcctcctt gactgctatg gcntacgacc gatatgcngc 240
catctccagc ccccttctcn accccactat catgaccagc ggcctctgta cagcatgga 300
ggtngcgccn tatgntngtt gntcnctng agctccctga nccannnctn ntcacntatt 360
ntaggetcna ccnntcgngc tcccgnctca ncancnaacc ccnttcgttc ctgnanactt 420
ctccancagc ttcttggttt ttctgcnnct gctcncgnc nnccttatnc ttngantca 480
cncctganct gcnntttctt ccangcngc ncgncancc cgnctctnct gnngaancct 540
ttncatnct gctcnatnct nctctcatcn ntctctantn ctctcennct cncgctcnnt 600
nncttnctnct ctnaacctnt cnnatcctca cctnngatat cctcncgntc ttctcgnctc 660
nttctnctgtc cganntctc anacnctcc ctanncg 697

```

<210> 130

<211> 625

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 473, 502, 524, 547, 550, 567, 572, 590, 596, 614-615, 619, 623

<223> n = any nucleotide

<400> 130

```

ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tgcgcccttcc 60
tatgtattta ttcttagacc acttggccct cactgacatc tccttttcat ctgtcactgt 120
ccctaagatg ctgatgaaca tgcagactca gcacctagcc gtcttttaca agggatgcat 180
ttcacagaca tattttttca tattttttgc tgacttagac agtttcttta tcaacttcaat 240
ggcatataac aggtatgtgg ccatctgaca tcctctacat tatgccacca tcatgactca 300
gagccagtgt gtcattgctg tggctgggtc ctgggtcatc gcttgtgcgt gtgctctttt 360
gegtaccctc ctctggccc agctttcctt ctgtgctgac cacatcatcc ctactactt 420
ctgtgacctt ggtgccctgc tcaagttggc ctgtcagac acctccctca atnagtttagc 480
aatctttaca ggagcattga cnggcattat gcttccatc ctgngcatcc tgggttctta 540
tgggcanatn tgggggtcac cattctncag anttcttta ccagggcatn tgcaangcct 600
tggccacttg tggnnccnc tcncg 625

```

<210> 131

<211> 657

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 344, 419, 443, 464, 486, 521, 524, 535, 537-538, 545, 552, 564, 567, 572, 584, 586, 588, 601, 604, 608-609, 611-612, 616, 618, 620, 622, 626, 629-630, 633, 638-639, 643, 645, 655

<223> n = any nucleotide

<400> 131

```

ttggcctcta gatgcatgct cgagcgccgc cagtgtgatg gatatctgca gaattcgccc 60
ttgatacatg attgggttgc ggaaggaata aatcatcggg ttgcggaagg aataaataca 120
tcgggttgcg gaaggaataa atacatcggg ttgcggaagg aataaataca tcgggttgcg 180
gaaggaataa atcatcgggt tgcggaagga ataaatacat cgggttgcgg aaggaataaa 240
tacatcgggt tgcgtaagga ataaatcatt ggggttgcgta aggaataaat cattgggttg 300
cgtaaggaat aaatcattgg gttgcgtaag gaataaatca ttgngttgcy taaggaataa 360
atctttgtgc tggtaaccgat ctatcatggg gttacgaaag ggaagaaata cattggaang 420
ggcgaattcc agcacactgc cgnccgctac tagtgggatc cgancctcgg accaagcttt 480
gatgcntagc ttgagtattt taacgccgcc aacctaaaat ngcnttggcc ttacncnntg 540
gaccnagctt gncctccttg cgtnaanntt cnttatctct cctntntntc ttctccccc 600
ncanaatnnt nccccngntn ancacncann ttntatannc ctngngctcc cctantc 657

```

<210> 132

<211> 624

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 7, 27, 34, 39, 481, 484, 489, 493, 502, 520, 566, 614, 623-624

<223> n = any nucleotide

<400> 132

```

tggccncta gatgcatgct cgagcgncgc cagngtgang gatatctgca gaattcgccc 60
ttcctatgta ttatttcctt aatgtcctct cgcttcttga tatttggtac tcttctgtgg 120
tcacacctaa gctcttggtc aacttcctgg tctctgacaa gtccatctct tttgagggct 180
gtgtgggtcca gctcgcttcc tttgtagtgc atgtgacagc tgagagcttc ctgctggcct 240
ccatggccta tgaccgcttc ctatccatct gtcaaccctt ccattatggt tctatcatga 300
ccagggggac ctgtctccag ctggtagctg tgtcctatgc atttggtgga gccaaactccg 360
ctatccagac tggaaatgtc tttgccctgc ctttctgtgg gcccaaccag ctaacacact 420
actactgtga cataccaccc cttctccacc tggcttgtgc caacacagcc acagcaagag 480
nggnctcna tgncttttct gntctggcac cttctggcn gctgcaggca ttctcacctc 540
taccggcttg ggcttggggg ccaatnggga ggatgcgcct caagaacagg gagggagaaa 600
ggactcccca cttntgcctc ccnn 624

```

<210> 133

<211> 590

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 161, 185, 190, 221, 278, 303, 320, 337, 348, 360, 371, 387-388, 390, 393, 395, 402, 407, 409, 413-414, 423, 437, 449, 455, 459, 461, 464, 466-467, 468, 471, 475, 482, 484, 487, 489, 491, 493-495, 499, 500, 503-504, 510, 515, 519-520, 528, 538, 540, 541, 543, 546, 548, 555-556, 558, 563, 566, 568, 572, 575, 584-586, 588

<223> n = any nucleotide

<400> 133

```

ggagttgata tgaacgggtt aagtgaagga gtgcccactg catagaagag accaaagaac 60
ttgcccctcc cttgggcata cggatttttg ggctggaggt agacagcaat gactgagctg 120
cagaagaggg tgaccacagt gagatgggag gagcaggctc naaaggcctt tctccatgct 180
gtggnagagn taattctcag cactgcctgg gcagtcggct ncataagagg caaggatgag 240
gctgagaggg acaaccacga agatgacact ggacacangc caactgtatc cattgtatga 300
ggnatctcca caggagagtn gaatcagaga tgggacnttc acattaanaa gttatttatn 360
tgctggcggg nacagatgcc caagcggnan ggngntatgg tncctggncna ttnnttcgtc 420

```


canacccatt atctcangcc acatgtatnt cagcnttttna ntcncnntnt nagtntagtc 480
 tngntgntnt ncnnnattnn cennctcttn tccntcann tatcatntc attccttnen 540
 nncanantt atggnnncnc cgnacncnct cngtnactcc cctnnngncg 590

<210> 134
 <211> 655
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 2-3, 5-11, 17485, 506, 512, 514, 518, 525, 543, 578, 590-592, 602, 609,
 612, 616, 637, 646

<223> n = any nucleotide

<400> 134
 gnntnnnnnn ntgttancct cgtccctcta gatgcatgct cgagcggccg ccagtgtgat 60
 ggatatctgc agaattcgcc ctccgatgt atttatttct acacagacac agtgacaatc 120
 tgatctctct tgcctttccc cacacactgc aacctctgcc tccacattca agtgattctc 180
 ctgcctcagc ctcttgagta gctggaatta cagatgtgag ccaccatgcc tggcctgtcc 240
 agatgttttt gaaacaaccc ccaccagcac tggagggagt caagggaaga caagccaggc 300
 atctgagctc ctctgtctct gcctttcctt ctactgttcc ccagggtaac ccgtcaccac 360
 ccccatcacg aacccttcca tctacacatt acgtaacaag ggcgaattcc agcacactgg 420
 cggccgttac tagtggatcc gagctcggtta ccaagcttga tgcatagctt gagtattcta 480
 acgntcacc taaatagctt ggcgtnatca tngncccnag cttgntttct gtgtgaaatt 540
 tgntatccgc tcacaaattc cacacaacat acgagccnga agcaataagn nntaaagcct 600
 gnggtgccna angagngagc taactcacia ttaattncgt tggctnactt gcccc 655

<210> 135
 <211> 639
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 4, 449, 480, 499, 510, 519, 524-525, 536, 543, 547, 550-551, 557-
 558, 564, 574, 581, 602, 615, 518, 621, 623, 627, 636, 639
 <223> n = any nucleotide

<400> 135
 ttngnccctc tagatgcatg ctcgagcggc cgccagtgtg atggatatct gcagaattcg 60
 cccttcctat gtacttgttt ctaagcaacc tctccttctt ggagatttgg tataccacag 120
 cagcagtgcc caaagcaccg gccatcctac tgggggagaag tcagaccata tcatttacia 180
 gctgtctttt gcagatgtac tttgttttct cattaggctg cacagagtac ttctctctgg 240
 cagccatggc ttatgaccgc tgtcttgcca tctgctatcc ttacactac ggagccatca 300
 tgagtagcct gctctcagcg cagctggccc tgggctcctg ggtggtgtgg tttcgtggcc 360
 attgcagtgc ccacagccct catcagtggc ctgtccttct gtggttcccc tgccatcaaa 420
 cacttcttct gtgacattgc accctggant gccctggcct gcaccaacac cacaggcagn 480
 aagagcttgt ggcctttgng aatcgcttgn tggggctanc cttngtcat gccctnatca 540
 cctttntcn nctatgnngt acantcatta agcnccaatc nctcatggga tccccctttg 600
 cnagtggccc ggcngcnaa ngncctnctc cccgtncn 639

<210> 136
 <211> 654
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 3, 108, 186, 216, 221, 252, 322, 329, 339, 344, 346, 350, 370, 376, 379, 385, 388, 391, 398-400, 404, 409, 418, 422, 428-429, 433, 437, 455-456, 462, 465, 474-476, 493, 496, 498, 503, 506, 515, 521, 527, 538, 540, 542, 548, 554, 561, 563, 565, 586, 595, 598, 612, 628, 639, 646

<223> n = any nucleotide

<400> 136

```

tgnccctcta gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc 60
cttccgatgt atttgtttct agccaacctg tcattaactg atgcttgnnt cacttctgcc 120
tccatcccca aaatgctggc caacattcat acccagagtc agatcatctc gtattctggg 180
tgtctngcac agctatattt cctccttatg tttggnggcc ntgacaactg cctgctggct 240
gtgatgccat angaccgtta tgtggccatt tgccaaccac cccattacag cacatctatg 300
agtccccagc tctgtgcaat antgctgcnc gtgtgctgng tgcnanccan ttgtctgect 360
gctgcacatn ctgttncnc cccnccngg nctctttnnn ccgnaccnc cctacaantc 420
cntatcannt tcnctnccc tttcttctcc ccccnnttct tncnccctc ctcnnnccta 480
ctttcttctc tcnccntnct canatnatca gtccnacctc nccttctntt ctctactnan 540
tntctctnct cccnctcacc ngntngtcta gtctgccgtc gcccctcgc tatenctncc 600
ccccctctcg cntccccga tegtctnct ctacctcnc catctnatcc ctcc 654

```

<210> 137

<211> 658

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 334, 346, 350, 352, 357, 360, 369, 376-379, 389, 394, 397, 400, 401-402, 411, 414, 421, 435, 438, 447-449, 460, 466-467, 474, 476, 480, 486, 500, 504, 510, 512-513, 515, 517, 521, 525, 528, 543, 551, 554-555, 557, 559, 569-570, 572-573, 585, 587, 591, 593-594, 600-601, 606-607, 612, 615, 617, 621, 623, 628-629, 631, 633, 636-637, 640, 655

<223> n = any nucleotide

<400> 137

```

ctctagatgc atgctcgagc ggccgccagt gtgatggata tctgcagaat tcgcccttcc 60
aatgtatattt tttctaagca acctctcctt cctggagatt tggatatacca cagcagcagt 120
gccccaaagca ctggccatcc cactggggag aagtcagacc atatcattta caagctgtct 180
tttgcatatg tactttgttt tctcattagg ctgcacagag tacttctctc tggcagccat 240
ggcttatgac cgctgtcttg ccatctgcta tcttttacac tacggagcca tcatgagtag 300
cctgctctca gcgcagctgg cctggggctc ctggncgtgn ggcttngtgn cnttgcnecn 360
ctcctagcnc tcatgnnnnc cttgccttnt gggncentgn nnatcacctt nttntctgt 420
nacacttgta cctcncgnet tgcctnnnc tgcctctaan tccctnngtt gtantnccn 480
gccttntctc ccttctgctn gttnatcttn anntnctgc ntctntgncc ctctcctteg 540
ttngacccct ntannncnc tcttcttcnn anntccctc tatenncceg ntnnccctcn 600
ntgtcnncg antangntac ntntcacnnt ntntcnctn ctctcctaac tcttnccg 658

```

<210> 138

<211> 670

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 342, 347, 358, 376, 383, 401, 403, 409, 448, 451, 455, 463, 470, 474, 478, 481-482, 484, 487, 489-490, 492, 499, 511, 514, 516, 518, 522, 525, 534,

536, 548, 556, 565, 577, 581, 585, 587, 589, 592, 598, 604, 607-609, 624-626, 628, 636, 639, 645, 651, 655, 660, 661-663, 667-668

<223> n = any nucleotide

<400> 138

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ggccccctag atgcatgctc gagcggggcgc cagcgtgatg gatatctgca gaattcgccc 60
ttcccatgta tttgttttcta agcaacctct ccttcctgga gatttgggtat accacagcag 120
cagtgcccaa agcactggcc atcctactgg ggagaagtca gaccatatca ttatcaagct 180
gtctttttgca gatgtacttt gttttctcat taggctgcac agagtacttc ctccctggcag 240
ccatggctta tgaccgctgt cttgccatct gctatccttt aactacgga gccatcatga 300
gtagcctgct ctacgcgcag ctggccctgg gctcctgggt gngtggnttc gtggccantg 360
tagtgcccac agcccntatc agnggcctgt ccttttggg ncncccgtn catcaacccc 420
ttctttctgt gacatttgcc cccctgcntt nccntggcc ctncaccaan cacngcangg 480
nngnttnenn gnetcggcnc cccctttgac ntantncntt gntgngcgt tatnctgcy 540
tttaatgncc ttaatnaaac tctcncctct catgttnttc nttntntng gnaccaantc 600
ttcnaannna ccttttttc catnnncncg tctacntcnc tctcnccttc ntcgngtttn 660
nngtcnnc 670
```

<210> 139

<211> 635

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 303, 314, 331, 339, 341, 360, 373, 379, 386, 395, 400, 406, 416, 419, 423, 433, 435, 452, 456, 463, 473, 480-481, 487, 490, 493, 499, 501, 504-505, 509, 511, 514, 517, 519, 522, 523, 534, 535, 543, 544, 554, 560, 563, 565, 567, 579, 584, 593, 596-597, 599, 605-608, 611-612, 619-620, 624, 632, 634

<223> n = any nucleotide

<400> 139

```
gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc ctcccgatgt 60
atttttttct aagcaacctc tccttcctgg agatttggta taccacagca gcagtgccca 120
aagcactggc catcctactg gggagaagtc agaccatata atttacaagc tgtcttttgc 180
agatgtactt tgttttctca ttaggctgca cagagtactt cctcttggca gccatggctt 240
atgaccgctg cttgccatct gctatccttt aactacgga gccatcatga gtagcctgct 300
ctnagcgcag ctgncctggg ctccctgggtg ngtgggttng ngccattcag cgcacacagn 360
cttcatcagt ggncttgtnc ttctgngccc ccgcncatcn aaccantttc ttctgngana 420
atngtacccc tgnanttgcc ctggccttgt anccancaca tangctcgta tgncttctn 480
ntggccnccn tgnttcgent ngtnnccgng ntancngnc tnnacgtcct ttennacact 540
ttnnctctat gttntcaacn tcnngncta ttcgctcang atanccactc ttncannnt 600
cggannnnta ncttttcenn acctctcttc cntnc 635
```

<210> 140

<211> 709

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 357, 369, 379, 382, 414, 430, 441, 458, 462, 468, 474, 481, 486, 494, 505, 507-509, 514, 520, 533, 546, 551, 555-556, 563, 570, 574, 589, 600, 602, 606, 613, 615-616, 622-623, 628, 638, 644, 653, 669, 671, 677, 679, 680-681, 689, 691, 696-698

<223> n = any nucleotide

<400> 140

```
atgaccctct agatgcatgc tcgagcggcc gccagtgtga tggatatctg cagaattcgc 60
```

```

ccttcctatg tatttatttc taagcaacct ctccttcctg gagatttggg tataccacag 120
cagcagtgcc caaagcactg ggccatccta ctggggagaa gtcagaccat atcatttaca 180
agctgtcttt tgcagatgta ctttggtttc tcattaggct gcacagagta cttcctcctg 240
gcagccatgg cttatgaccg ctgtcttgcc atctgctatc ctttacacta cggagccatc 300
atgagtagcc tgcctcagc gcaagctggc ctgggctcct ggggtgtgtg tttcggnggc 360
cattgcagng cccacagcnc tnatcagtgg gctgtccttt ctgtgggccc ccnggcccat 420
tcaacccacn tttctttttg nggatattgg caaccccntg gnatttgncc cctnggccct 480
ngcacncaaa ccancaccag ggtcngnnna caanctttgn cgggcccctt ttntgaaatt 540
ggcctnggtg ngggnnntaat tcnctttggn tttnaatgcc cttccaatna acctttttgn 600
cnttntatg ggngnncct tnnattcnag caccacanc ttangggaac ccnccttttt 660
gtcaagtngg nccggtmann naaaagccnt ntccnnntg cccccccg 709

```

<210> 141
 <211> 671
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 1, 18, 368, 374, 375, 386, 392, 404, 405, 414-415, 420-422, 445-446, 449-450, 452, 460, 467-468, 471, 484, 488, 490, 512, 514, 531, 536-537, 541-542, 549, 562, 568, 572, 574-575, 577, 585, 588, 592-593, 595, 599, 617, 619, 627, 636, 639, 647, 658-659, 661-662, 665-667, 669
 <223> n = any nucleotide

```

<400> 141
ntgggccctg agatgcangc tcgagcgggc gccagtgtga tggatatctg cagaattcgc 60
ccttcccatg tatttttttc taagcaacct ctccttcctg gagatttggg ataccacagc 120
agcagtggcc aaagcactgg ccatacctact ggggagaagt cagaccatat catttacaag 180
ctgtcttttg cagatgtact ttgttttttc attaggctgc acagagtact tctcctggc 240
agccatggct tatgatcgct gtcttgccat ctgctatcct ttacactacg gagccatcat 300
gagtagcctg ctctcagcgc agctggccct gggtcctggg gtctgtggtt tcgtggccat 360
tgaagtgncc acanngcctc atcagntggc cntgtccttc tgcnnccccc cgtnncattn 420
nncacttctt tcgtgacatt gccannctnn tnttgccctn gtccttnncc natcatccat 480
ggcngttngn gctgttgccc ctttcgctca cncngctgc gccattctc nctgtnncaa 540
nngcctcent ctactctctg cnttctanct antnnncct ctttncctnc tnnantctnt 600
cctcgatctc ctttcangnc tccgctncac tgctcctna acgtccnttt ctccctnnnt 660
nntcnnntnc g 671

```

<210> 142
 <211> 739
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 5-6, 23, 232, 235, 349, 353, 358, 374, 397, 400, 406, 423-424, 427, 431, 434, 436-437, 440, 445, 448, 450, 452, 467, 471, 477, 488-489, 497-498, 506, 510-512, 518-520, 525, 528, 547, 550, 557-558, 560, 562-563, 566, 569, 590-591, 604-605, 613, 619, 631, 638-639, 642, 646, 649-650, 654, 660-661, 664, 670, 677, 679, 687, 690, 692, 694-695, 701, 714, 716, 722, 725, 731, 739
 <223> n = any nucleotide

```

<400> 142
gggcnncttt gggtatgcct tgncccttag atgcatgctc gagcggccgc cagtgtgatg 60
gatatctgca gaattcgccc ttccaatgta cttatttcta gccaacctgt cattaactga 120
tgccgtgttc acttctgcct ccatacccaa aatgctggcc aacattcata cccagagtca 180
gatcatctcg tattctgggt gtcttgacac gctatatctc ctccttatgt tngngggcct 240

```

```

tgacaactgc ctgctggctg tgatggcata tgaccgctat gtggccatct gccaaccact 300
ccattacagc acatctatga gtcccagct ctgtgcacta atgctgtgng tgnctgngt 360
gctaaccaac tggmctgccc tgatgcacac actgttnctn atcccngcgc tttcttggtc 420
ccnntangcc nctnctntcn ttccttntn tntctctacc tctccntcg ngctctnccc 480
cttcccnnt cttcctnntg tactnctan nctgttnnn cccctctntt ctctctcttc 540
ttctctntcn cttctgnmnc tnttntctnc tcttgtccct acctgtccn ntcatacctt 600
ttcnnaatcg ctntctatnc cgcctatagt ncaattcnnc tncctnctnn attncctacn 660
ncntctctcn ccatcantnc taacctnctn cntnntctct ntctctgtcc tcanctctc 720
gncnatttc nttttccn 739

```

<210> 143

<211> 611

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 497, 528, 536, 540, 543, 551, 557, 563, 565, 570, 582, 589, 600, 605

<223> n = any nucleotide

<400> 143

```

gatgatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc cttgatagat 60
aattgggttc agcatggggg tcaccacagt gtacatcata gccatgacag tgtccttttag 120
agtagaacta ttagctgatg agcataagta gagaccaata acggttccat agaacagtga 180
caccacagac aggtgggagc cacaagtaga gaaggccttg cagataccct tagaagaagg 240
gaccttgagg atggaggaga caattcttgc ataggaccca aggatgagta ggaatgggat 300
gacaagaatg agccctccca tgataaatat caccattca ttaactcgag tgtcagagaa 360
ggccagcttc agcagagcag acatatcaca gaaaaagtgg gggatcacat tgtctgcaca 420
aaaacacaac ctggccatga gtaaagtgtg taacatggca tggaaggtgg tcagcaccca 480
ggacagcgcc accaggncca gacagagcat ggggctcatg atggcgngt agtgcngggg 540
gangcagatg nccacantag tgnatnagn ccatggtcac angggaggna gctttcagg 600
ctttnaataa c 611

```

<210> 144

<211> 641

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 242, 263, 289, 315, 353, 357, 360, 372, 376, 385, 392, 397, 407, 416, 420, 422, 425, 429, 431, 433, 439, 446-449, 454, 465-466, 471, 479, 485, 492, 499, 501, 512, 516, 524, 528-529, 532, 534, 539, 543, 545, 547, 549, 561, 563, 565, 572-573, 575, 578, 582, 584-586, 596, 602, 604, 613, 615, 617, 622, 627-628, 632, 636-637, 639

<223> n = any nucleotide

<400> 144

```

gcgtgctcga gcggccgcca gtgtgatgga tatctgcaga attcgccctt gttgcgcaaa 60
gagtacatga aggggttaag tgaaggagtg cccactgcat agaagagacc aaagaacttg 120
cccctccctt gggcatacgg atttttgggc tggaggtaga cagcaatgac tgagctgtag 180
aagagggtga ccacagttag atgggaggag caggtcccaa aggcctttct ccatgctgtg 240
gnagagttaa tcctcagcac tgnctgggca gtggctccat aagaggcang gatgaggctg 300
agaggcacia ccacngaaga tgacactgta cacagccaac tgtattttat tgnaggnggn 360
atctccacag gngagncaa tcagntgatg gntccnccc atttcanaag tcactntatn 420
tntnttngc ngncacgag gtccnnnnng agcngttctt gtccnntctt nactatcgnt 480
tacctccct cntccctent nttttcttct cncctnccct ttcnttttnc cntntccct 540
gtncnctnt atcttcccta ntntctctt tntntctnt tngnnnccct cctctntctt 600
tntntccctc tcnantat cncctgncc cncnntnc c 641

```

<210> 145
 <211> 837
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 8-9, 12, 330, 350, 364, 367, 387, 390-391, 393-395, 398, 399-400, 403, 406, 409, 411, 413, 416, 428-429, 438, 449, 454, 464-465, 475, 481, 486, 488, 492, 500-501, 504, 506-507, 515, 523, 532, 538, 548, 556, 562, 565, 567, 573-575, 578, 582-583, 589, 592, 598, 599-600, 604, 608, 612, 629, 637-639, 643, 645, 647, 652, 663, 666, 668, 672, 679, 686-687, 689-690, 693, 699, 710, 715, 717, 719, 721-722, 724, 732-734, 748-751, 763-764, 772-773, 780, 783, 791, 811, 818, 828, 834, 836
 <223> n = any nucleotide

<400> 145
 ggttgccnnc gnttaggcat tgggccctct agatgcatgc tcgagcggcc gccagtgtga 60
 tggatatctg cagaattcgc ccttccgatg tatttgtttc taagcaacct ctccttcctg 120
 gagatttggg ataccacagc agcagtgcc aaagcactgg ccatacctact ggggagaagt 180
 cagaccatat catttacaag ctgtcttttg cagatgtact ttgttttctc attaggctgc 240
 acagagtact tctccttggc agccatggct tatgaccgct gtcttgccat cctgctatcc 300
 tttaactac ggagccatca tgagtagccn tgctctcagc tgcagctggc cctgggctcc 360
 tggntgngct ggtttctcgc cctattnttn ncnnnacnnn ccntantcng ncctnctctc 420
 ctttcttntt tcccttttnc tcaactcatnc ctctnctctc tttntgtgcc tcttnataac 480
 nttgtntntc gnttctcccn ntentnncct ctctnttgc tcnctctcct cntttcgnat 540
 ccctttgntc tctacnctct tncgnantca ctnnnatntc tnttcaacng cntcctcnnn 600
 gatnttcncc tntctactgc tactctctnc tatactnnnc ttntntnecat anttcgtctg 660
 ctacnanc tntcactcnt tcccanncn tcnctgtent ctgactcten cctentntnt 720
 nntnctcac cnnntacatg gtctcttntn ntccatctcg tcnntctctc cnnataacgn 780
 ttncatactc nctaacttct ctccatcatc ntaacctntc tttctttntc cctngnc 837

<210> 146
 <211> 639
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 16, 340, 379, 394, 401, 425, 428, 433, 435, 437-438, 446, 457, 463-464, 487, 504-505, 508, 510-511, 517-518, 529, 542, 546-547, 549-550, 552-553, 555, 561, 567, 569, 573, 576, 582, 584-586, 590, 594, 597, 599-600, 604, 611, 618, 623, 631, 634, 636
 <223> n = any nucleotide

<400> 146
 gatgatgctc gagcgnccga gtgtgatgga tatctgcaga attcgccctt ccaatgtatt 60
 tatttctagg caccactgac ttcttccctc tggccgtcat gtctctggat cgttacctgg 120
 caatctgccg accactccgc tatgagaccc tgatgaatgg ccattgtctgt tcccaactag 180
 tgctggcctc ctggctagct ggattcctct gggtcctttg cccactgtc ctcatggcca 240
 gctgcccctt ctgtggcccc aatgggtatt accacttctt tcgtgacagt tggcccttgc 300
 tcaggctttc ttgtggggac accacactgc tgaaactggg ggctttcatg ctctctacgt 360
 tgggtgtact gggccacng gctctgacct cagntttcta ngcccgcatt cttgccactg 420
 ttctnagngc ccncnanngc ttgcengagc gaagcanaag atnnttttca cattgcgac 480
 tcggaantta aaggggggtgg cgcnnncan nctgggnngc ttcattctnt ctttttactt 540
 tnccannngn tntnngctca ntccctntnc tcntcncaat cntnnnggcn ctentgntnn 600
 gtanactgcc nttaattnga ccnctttccc nacnncac 639

<210> 147
 <211> 618
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> variation
 <222> 347, 411, 415, 418, 435, 441-442, 445, 451, 466, 482, 506, 508, 513, 515-516, 526-527, 531-532, 534, 536, 552, 561, 564, 571, 574, 581, 583, 586-588, 591-592, 616

<223> n = any nucleotide

<400> 147
 catagatgca tgctcgagcg gccgcagtgat gatggatata tgcagaattc gcccttccga 60
 tgtaagttct ttctaggcac cactgacttc ttctctcttg ccgtcatgtc tctggatcgt 120
 tacctggcaa tctgccgacc actccgctat gagaccctga tgaatggcca tgtctgttcc 180
 caactagtgc tggcctcctg gctagctgga ttctcttggt tcctttgccc cactgtcctc 240
 atggccagcc tgcctttctg tggccccaat ggtattgacc acttctttcg tgacagttgg 300
 cccttgctca ggctttcttg tggggacacc cacctgctga aactggnggc ttctatgctc 360
 tctacgttgg tgttactggg ctactggct ctgacctcag nttcttange ctgcattctt 420
 gtcactgtct caggncctct nnagntgctg ngcgaaaggaa agcgctttc acttgcgcct 480
 cnatcttaca ggggtggcat catctnangg gngnntgca tccttnncta nntnncagg 540
 tcccagctat antccaaagt nctnaaaaca ngancctcgg nangannct nntattctac 600
 ccttcttctg aacctncc 618

<210> 148
 <211> 633
 <212> DNA
 <213> Homo sapiens

<220>
 <221> variation
 <222> 2, 11, 33-34, 36, 38, 346, 352, 370, 406, 412, 414, 417, 420, 423-424, 427, 434, 437, 440, 449, 452-453, 474-475, 477, 486-487, 491, 496, 499-500, 505-506, 515, 517-518, 533, 535, 537, 540, 543, 547, 549, 556, 558, 563, 568, 570, 571, 575, 577, 580, 588, 590, 593-594, 598, 607, 612, 623, 626
 <223> n = any nucleotide

<400> 148
 cntagatgca ngctcgagcg ggcgccagcg tgnngnanat ctgcagaatt cgcccttcca 60
 atgtattttt tctcactaac ttgtctttcc tagatctctg cttcaccacc agttctatcc 120
 cccagctgct tttcaatcta ggcagcccag gcaagactat cagccacacg ggctgtgcca 180
 tccagctctt catgttccctg ggcctgggtg gcaagagtgt attctcttgg cagccgtggc 240
 ctatgaccgc ttcatgcaa tctgcaagcc ctttactat tctgtcatta tgcaccctca 300
 gctgtgctgg aagttggtgt ctgtggcccg ggggtgttgg actcncagc tntctaggta 360
 tgcttcctgn gactatgaag ctgtcacga tgcggaagat gtaagnttg ancntnccn 420
 ttnntgngat gcngcnten tataaaaanc annctggcg ggtcacagt cttngnata 480
 gcattnngtc nccttnatnn catennattt gcctngnngt ccctcgttcc cantntncan 540
 tcnttctnng gcttancntt ctncaccngn ncttncntan ctactccntn ttnnttctc 600
 cttctanctc tncatcttct ttnccntcca tcc 633

<210> 149
 <211> 624
 <212> DNA
 <213> Homo sapiens

<220>

<221> variation

<222> 433, 456, 511, 513, 516, 533, 541, 543-544, 557-558, 561-562, 567, 573, 582, 597, 604, 606, 609, 617, 619

<223> n = any nucleotide

<400> 149

```

gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc cttgttccta 60
agactataca tgaatgggtt tagcatcggg ttgaaagaac tgtaaaatag aaaaaggacc 120
ttctgctgct cctcaggatg gcgggactta ggggccatgt acatgacgat ggcgctgcc 180
aagaagagtc ccactacgca gaggtgggag gaggcaggtg agaaggcctt tctgcggccc 240
tccccagact ggatcctcag gatggccgcc aggatgtgtg agtaggagac cagcaccagg 300
cagagtggtc ccaccaggat gaacatgcag gctgcaaaga tgaccacctg gttgagccag 360
gtatcagcac aggccagcct gaggacagac aggatttcac aagaagaagt ggttgatttc 420
acgaggccca canaaagggc agtcttagga tgaggntcac atggaccata gccaggaggg 480
agccacattg tcccaggaag ngntgnccag agtgatgcag acttttcagg tcntgatgat 540
ngnnttattc ggagagnntg nnagacnggt cancggtccc gntcgtagga caattanac 600
ccancngng cttcantna tgtc 624

```

<210> 150

<211> 611

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 449, 480, 506, 555, 578-579, 601, 608, 610-611

<223> n = any nucleotide

<400> 150

```

gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc cttccaatgt 60
atttatttct ctctgacctc tccttcttgg acctctgctt taccacaagt tgtgtcccc 120
agatgctggc caacctctgg ggcccaaaga agaccatcag cttcctggga tgcctgtgcc 180
agctcttcat cttcctgtcc ctggggacca ctgagtgcac cctcctgaca gtgatggcct 240
ttgaccgata cgtggctgtc tgccagcccc tccactatgc caccatcatc ccccccgcc 300
tgtgctggca gctggcatct gtggcctggg ttatgagtct ggttcaatcg atagtccaga 360
catcatccac cctccacttg cccttctgtc cccaccagca gatagatgac tttttatgtg 420
aggteccatc tctgattcga ctctcctgng gagatacctc ctacaatgaa atccagttgn 480
ctgtgtccag tgtcatcttt ggtggntgtg cctctcagcc tcatccttgc ctcttatgga 540
gccactgccc aggcnggggc tgaggattaa ctttgcenna gccatggaag aaaggtcttt 600
nggacctngn n 611

```

<210> 151

<211> 619

<212> DNA

<213> Homo sapiens

<220>

<221> variation

<222> 415, 417, 427, 516, 524, 536, 544-545, 558, 561, 575, 580, 582, 584, 590, 607, 610, 615

<223> n = any nucleotide

<400> 151

```

gatgcatgct cgagcggccg ccagtgtgat ggatatctgc agaattcgcc ctttctttat 60
ttcgaagagt atacactagt ggattgaaga gaaacaaata cataggaagg gcgaattcca 120
gcacactggc ggccgttact agtggatccg agctcggtag caagcttgat gcatagcttg 180
agtattctaa cgcgtcacct aaatagcttg gcgtaatcat ggtcatagct gtttctgtg 240
tgaaattgtt atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtaaa 300

```



```

gcttgggggtg cctaattgagt gagctaacte acattaattg cgttgcgctc actgtccgct 360
ttccagtcgg gaaacctgtc gtgccagctg cattaatgaa tcggccaacg cgcgngnaga 420
ggccggnttg cgtattgggc gctcttccgc ttctcgctca ctgactcgct gcgctcggga 480
cgtccggctg cggcgagcgg tatcagctta ctcaanggcc gtantacggg tattcncagg 540
aatnnggggt taacgccngg naaagaacat tgtgngccan angncaagcn taatgccag 600
gaaccgntan aacgntccc 619

```

<210> 152

<211> 959

<212> DNA

<213> Homo sapiens

<220>

<221> variation

```

<222> 139, 203, 209, 211-213, 216, 221, 225, 234, 243, 245, 248, 253, 255,
261, 277-279, 287, 296, 302, 311, 318, 321, 344, 348, 350, 353, 376, 379,
381, 383, 395, 397, 402, 406-407, 414, 420, 429, 436, 438, 448, 450, 452,
463, 476, 481, 483, 496, 499, 502, 517, 520, 523, 527, 530, 535, 537, 539,
542, 549, 550, 558, 570, 571, 579, 580, 584, 587, 596, 605, 609, 634-635,
637-638, 640, 644, 648-649, 663, 665-666, 671, 675, 677, 681, 692, 699, 705,
715, 718, 721, 736, 745, 750, 758, 766, 778-779, 791, 793, 797, 811, 816,
821, 829, 831, 832, 837, 839, 840, 843, 846, 846, 851, 858, 883, 889, 892,
895, 897, 898, 917, 923, 928, 935, 945, 956

```

<223> n = any nucleotide

<400> 152

```

ctcgagcggc gcagtgtgat ggatatctgc agaattcgcc cttectatgt attattttctc 60
cataatttat ctattgccga tatctgcttc tcttccatca cagcgcccaa ggttctggcg 120
gaccttctgt ctgaaagana gaccatctcc ttcaatcatt gctccactca gatgtttcta 180
ttccacctta ttggaggggc ggntgtatnt mnncentggt ncccnatgcg cctncttttc 240
ccntntcntt tcnantcttt ncgcctcttc tcatgcnnc ccttccntct tattentgtc 300
gnaatacgct ntctccgnet nctgtctgct catccttgct gttncgtntn canctcatcg 360
ctgtctgtcg tactnttnc ntncgtgtgc tgcgngntca tncacnntct caancgtctn 420
ccctcaactnc tctttntntg ctcttctntn cnccgtgtct tancttcttg cctgntacg 480
nncncccgct catacnegng tncgtgtatc cctctnatn ttntntntcn cctntntnc 540
cntctcacnn acttctngt ctctctccan ncttcgacnn ctncctnate tccacnacgc 600
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ctnatnateg ntattcnaa tcatactcgg tactgtttct gtntcttnt cntgnncnt 900
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<210> 153

<211> 375

<212> DNA

<213> Unknown (H38g1 nucleotide)

<220>

<223> Synthetic construct

<400> 153

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agcattegtg caactgaggg ccgtcgccgt gccttctcca cctgcagtgc tcacctcatt 180
gccatctctt gtgcctatgg gcccatcatc actgtctacc tgcagccac acccaacccc 240
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atctatacct tgaggaataa ggaagtaaaa acagccctga aaacaatatt gcacaggaca 360
ggccatgttc ctgag 375

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<210> 154
 <211> 965
 <212> DNA
 <213> Unknown (H38g2 nucleotide)

<220>
 <223> Synthetic construct

<400> 154
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 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcgggttcac ctcgggccacg 240
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 tttct 965

<210> 155
 <211> 936
 <212> DNA
 <213> Unknown (H38g3 nucleotide)

<220>
 <223> Synthetic construct

<400> 155
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 ggaaatgtgc tcatcactct ggccatcagc tctgattccc acctgcacac cccatgtac 180
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 ggaagagtcc tatggagacc ctttcagagg cctaaa 936

<210> 156
 <211> 914
 <212> DNA
 <213> Unknown (H38g4 nucleotide)

<220>
 <223> Synthetic construct

<400> 156
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 tcctactgtg gcccacatca ggtggactac ttcttctgtg acattcctgc tgttttacct 540
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 ttgcttgggt ccaggtgcaa atattaaata atgttgtctc acccatgctg aactcgtaa 840
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<210> 157

<211> 951

<212> DNA

<213> Unknown (H38g5 nucleotide)

<220>

<223> Synthetic construct

<400> 157
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 gaccgctatg tggctgtgtg tgatgccctg cgatactcgg ccacatgca tggagggctg 420
 tgtgctaggt tggccatcac atcctgggtc agtggttca tcagctctcc tgtgcagact 480
 gctatcacct ttcagctgcc catgtgcaga aacaagttaa ttgatcacat atcctgtgaa 540
 ctccctagctg tggctcaggct ggcttgtgtg gacacctcct ccaatgaggt caccatcatg 600
 gtgtctagca ttgttcttct gatgacacc ttctgcctgg ttcttttgtc ctacatccag 660
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 tgtgcctctc acctcacagt ggttgcctg tgctatgggt tggccatttt cacttacatc 780
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<210> 158

<211> 1025

<212> DNA

<213> Unknown (H38g6 nucleotide)

<220>

<223> Synthetic construct

<400> 158
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 ctggagaaac tgctcatcat catggcagtc agccctgact tccacctcca caccctcatg 180
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 agatgtctct ctttgccatt tttggaggca tggagagag acatgctcct gagcgtgatg 360
 gcctacgacc agttttagc catctgtcac cctcccatat cgttcagcca tcttgaacct 420

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ctcaatatct tcttatctgt tccattcctt ttgtaggggt ggttaaaaaa ggcagcaagg 1020
tcaaa 1025

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<210> 159

<211> 936

<212> DNA

<213> Unknown (H38g7 nucleotide)

<220>

<223> Synthetic construct

<400> 159

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ggcaacctga gcatgatcac tctaataagg ttcagtcttc acctgcacac ccccatgtac 180
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atgctgggtg attttgtgtc agagaggaa attatctcct acccagcatg catgactcag 300
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gaccactaca ttgccatag taaccactg ctttaccatg tcgccatgct ttatcagggtc 420
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cagccatcat ccgtcagctc catggaccag gggagtgtct tctgtgtttt atgctactgt 840
tgtgcccag ctgaaccccc aatctacagc ctgaggaaata aagatgtcaa agttgcctta 900
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<210> 160

<211> 985

<212> DNA

<213> Unknown (H38g8 nucleotide)

<220>

<223> Synthetic construct

<400> 160

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agtattggg gcatcaggt atccctcttc gccctgatcc tggccatgta ttggtgact 120
attttaggaa acacctcat tcttcttctg atcagactgg acaacaggct tcatacccc 180
atgtacttct ccttagtgt tctgtcattt gtggactttt gttatacaaa gagtattgtc 240
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gggctgtgcc tggggctggc ggccagccgc ctggtggctg gcttctcaaa tccctgatg 480
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ctgtgcctct cacctcattg tggtttgcat gtgctttggg gctaccatct gcacctacct 780
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ggtgtcaccc atgttgaacc ccttgatcta cagcttgagg aataaggaag ttacggctgc	900
tgtccggaaa gttttagaaa gatgcagata aagggtcaag actctaagaa cctcttgta	960
tctatcatca aaaccaaaaa ggaga	985

<210> 161

<211> 954

<212> DNA

<213> Unknown (H38g9 nucleotide)

<220>

<223> Synthetic construct

<400> 161

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ccaaaaatgg agatgacct gtcaggagtt gtcgccatct tctacttaat tacattgggtg	120
ggtaacacag ccatcattct tgcattcttc ctggattccc agcttcatac accaatgtac	180
tttttctca gaaatttatt ttctctagat ctatgtttca caaccagcat catccctcag	240
atgctgggtca acttgtggg acctgataag accatcagct atgtgggttg tatcatcaa	300
ctctatgttt acatgtggtt gggctcagtt gagtgccttc tcctggctgt tatgtcctat	360
gatcgtttta cagctatatg taagcccttg cattattttg tagtcatgaa cccacatcta	420
tgtctaaaga tgattatcat gatctggagt attagtttg ccaattctgt agtattatgt	480
acactcactc tgaatttgcc cacatgtgga aacaacattc tggatcattt cttgtgtgag	540
ttgccagctc tggccaagat agcttgtgta gacaccacaa cagttgaaat gtctgttttc	600
gctttaggca ttataattgt cctcacacct ctcatcctta ttcttatatc ctatggctac	660
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tgtggatctc atcttactgt agtgtctatg ttctatggaa ctattatcta catgtacctg	780
caaccaggta acagggcttc caaagaccag ggcaagttcc tcaccctctt ttacaccgtc	840
atcactccaa gtctcaaccc gctcatttac accttaagaa ataaggacat gaaggatgcc	900
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<210> 162

<211> 970

<212> DNA

<213> Unknown (H38g10 nucleotide)

<220>

<223> Synthetic construct

<400> 162

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gatccagagc tgcagtcggt cctcgtcttg ctgtccctgt cctgtccac gtatctggcc	120
acgggtgctga ggaacgtgct caacatcctg gctgtcagct ctgactcccc cctccacacc	180
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<210> 163

<211> 933

<212> DNA

<213> Unknown (H38g11 nucleotide)

<220>

<223> Synthetic construct

<400> 163

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gaaaacgtga	tcatcatcct	attggtgctg	caaaatcggc	cactgcacaa	gcctatgtac	180
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<210> 164

<211> 939

<212> DNA

<213> Unknown (H38g12 nucleotide)

<220>

<223> Synthetic construct

<400> 164

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<210> 165

<211> 954

<212> DNA

<213> Unknown (H38g13 nucleotide)

<220>

<223> Synthetic construct

<400> 165

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cttttgggaa	atgttatatt	caggaccctt	gtttgttctc	tgggatttca	cacatcatgc	180
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gtgaaacaag cttcacataa aatattttaa gaacaaactt tattcatgaa aata 954

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<210> 166

<211> 998

<212> DNA

<213> Unknown (H38g14 nucleotide)

<220>

<223> Synthetic construct

<400> 166

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atggatggag agaatacttc agtggatatct gagtttttgt ttctgggact cactcattca 60
tgggagatcc agctcctctt cctagtgttt tctctgtgct tctatgtggc aagcattact 120
ggaaacatcc tcatttgtgtt ttctgtgacc actgaccctc acttacactc ccccatgtac 180
tttctactgg ccagtctctc cttcattgac ttaggagcct gctctgtcac ttctcccaag 240
atgatttatg acctgttcag aaagcgcaaa gtcattctct ttggaggctg catcgctcaa 300
atcttcttca tccacgtcat tgggtgtgtg gagatgggtg tgctcatagc catggccttt 360
gacagtatat tggccctatt aagccctctc actatctgac cattatgagc ccaagaatgt 420
gcctttcatt tctggctgtt gcctggaccc ttgggtgcag tcaactccctg ttccaactgg 480
catttcttgt taatttacc tctgtggcc ctaatgtgtt ggacagcttc tactgtgacc 540
ttcctcagct tctcagacta gcctgtaccg acacctacag attgcagttc atggtcactg 600
ttaacagtgg gtttatctgt gtgggtactt tcttcatact tctaactctc tacatcttca 660
tcctgtttac tgtttggaaa cattcctcag gtgggtcatt caaggccctt tccactcttt 720
cagctcacag cacagcgggc cttttgttct ttgggtccacc catgtttgtg tatacatggc 780
cacaccctaa ttcacagatg gacaagtctt ttgctatttt tgatgcagtt ctcaactcct 840
ttctgaatcc agttgtctat acattcagga ataaggagat gaaggcagca ataaagagag 900
tatgcaaaca gctagtgtat tacaagaaga tctcataaat gatacaataa gcccttctcg 960
ttaaacatga tatggcttta tgtttcttct tttgatat 998

```

<210> 167

<211> 966

<212> DNA

<213> Unknown (H38g15 nucleotide)

<220>

<223> Synthetic construct

<400> 167

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cacacagggc cacggaatct cacagatgtc tgagaattcc tctcctggg actctcagag 60
gatccagaac tgcagccact cctcactttg ctgtccctgt ccctgtccat gtatctggctc 120
acgggtgctga ggaacctgct cagcatcctg gctgtcagct ctgactcccc cctccacacc 180
cccatgtact tctcctctc caacctgtgc tgggctgaca tcggtttcac ctaggccaca 240
gtccccaaga tgattgtgga catgcagtcg catagcagag tcactctca tgcggtctgc 300
ctgatacaga tgtctttatt agtccctttt gcatgtatag aaggcatgct cctgactgtg 360
atggcctatg actgctttgt agccatctgt tgcctctgct actaccagct catcgtgaat 420
cctcacctct gtgtcttctt cgttttggtg tcctttctcc ttagcttgtt ggattccag 480
ctgcacagtt ggattgtgtt acaattcacc atcatcaaga atgtggaaat ctctaattct 540
gtctgtgacc cctctcatct tctcaacttt gcttgttctg acagcgtcat caatagcata 600
ttcatatatt tcgatatgac tatgtttggt tttcttccca ttccagggat cctatggctc 660
tactataaaa tcgtccctc cattctcagg atttcatcgt cagatgggaa gtataaagcc 720

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ttctccacct gtgcctctca cctagcagtt gtttgctgat tttatggaac aggcattggc 780
atgtacctga cttcagctgt gtcaccaccc cccaggaatg gtgtgggtggc gtcagtgatg 840
tacgctgtgg tcaccccat gctgaacctt ttcattctaca gcctgagaaa cagggacata 900
caaagtgcc tgcggaggct acgcagcaga acagtcgaat ctcatgatct gttccatcgt 960
ttttct 966

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<210> 168

<211> 837

<212> DNA

<213> Unknown (H38g16 nucleotide)

<220>

<223> Synthetic construct

<400> 168

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atgtacctgg ccactgtcct ggggaacctg ctcattcatcc tggccataag catagactcc 60
cgctgcaca ccccatgta cttcttctc agcaacatgt cctttgtgga caactgcttc 120
tcaccacccg tcccaagat gctggccaat cacatactca ggactcaaac catctccttc 180
tctggctgtc tcatgcagat gtattttatc agtgagcttg ctgacatgga caatttcctc 240
ctggctgtga tggcctatga ccgctttgtc gccgtgtgcc gcccttaca ttacacagca 300
aagatgaccc atcagctctg tgccctgctg gtcactggat catgggtggg tgccaactcg 360
aatgctctgc tgcaacacct gctgatggct cgactctcat tctgtgcaga caacaccatc 420
ccccacatct tctgcgatgt gactccctc ctgaaactct cctgttcaga cacacacctc 480
agtgaagtga tgattcttac tgaggctgcc ctagtcaaga tcacccatt tctttgcctc 540
ctggcttctc atatgcacat cacctgcgtt gtcctgaggg tcccatccac aaaggaaga 600
tggaagacct tctccacctg tggctccac ctggctgtgg ttctcctctt ctatggcacc 660
atcatgtctc catatctcag aacttcaccc tccactcag ctcagagaga tatagcagct 720
gctgtgaggt tcacagtggg gactccctg atgaatcctt tgatctacag cctgaggaac 780
aaggacataa aaggggctct tgtaaaagtg gttgctgtga aatttttttc tgttcaa 837

```

<210> 169

<211> 770

<212> DNA

<213> Unknown (H38g17 nucleotide)

<220>

<223> Synthetic construct

<400> 169

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ttcattctct ggggtttctt tgaccacccc tagccggaaa tgtttctctt cataatgggg 60
cttggttctt atctctgcat actggtggac aacatctcaa ttattgtggg acccagggga 120
tattttaggg gagcaccaa tgcattctt tagctgtgac gtctttggat ccttacattg 180
ccatctgcaa acacttgagg taccagcta tcatgcatca gcaactctgt gtcctcctag 240
tggccatggc atggctaagc agtttgcca actctacttc agtcatccct tgccgtccag 300
ctgccactag gcggtaacaa ggtggagcag ttctgtgtg aggtctcagc gatgatcaag 360
atatcacgtt ttgacaccac attcaatgta tctatgctct ccattgtgag gatattttag 420
tcctctgttc tctaataaat tatctttgct tactgtggat tcattgtagc tactgtgctg 480
aggattcagt cctcaggggg aaagaaggag gtcttcaaca catgtgggtc tcatattgta 540
tctctctct atgggcctgt aattagcatg tatgtacagc cctctgcca ctcccaggac 600
aaaaacaaat tcatgtccct gttctacagt ttggtgactc ctatgcttaa cctttttatc 660
tacactttga gcaacaggga cataaaagg gcaatgagga ggcttctgt cttttgtat 720
caccaggaag agaacaaaag taattatttt tatactccac attcttcata 770

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<210> 170

<211> 1003

<212> DNA

<213> Unknown (H38g18 nucleotide)

<220>

<223> Synthetic construct

<400> 170

tctacagacc	cacagaatgt	aacggatgtc	tctcgattcc	tcctcctcaa	actctcagag	60
gatccagaac	tgcagccggt	ccttgctggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctggggaacc	tgctcatcat	cctggccgtc	agccctgact	cccacctcca	cacttccatg	180
tactttcttc	tctccaacct	gtccttgcc	gacatcggtt	tcctcctccc	cacgggtcccc	240
aagatgggtg	tggacatcca	atctcacagc	agtcacatcc	tatgcaggct	gcctgactca	300
gatgtctctc	tttgccattt	ttggaggcat	ggaagagaca	catgtcctctg	aatgtgatgg	360
cctatgtccg	gtttgtagcc	atctgtcacc	ctctatatca	ttcagccatc	atgaaccctg	420
gtttctgtgg	cttcttactt	ttgttgctct	ttttttttct	cggctcttta	gacgccagc	480
tgcacaacat	gattgcctta	caaatgacct	gcttcaagga	tgtggaaatt	cctaatttct	540
tctgtgatcc	ttctcaactc	ccccatcttg	catgttgtga	caccttcacc	aataacatca	600
tcattgtatt	ccctgctgcc	gtatttggtt	tccttcccat	ctcggggacc	cttttctctt	660
actctaaaat	tgtttcctcc	attctgaggg	ttctgtcatc	aggtgggaag	tataaacctt	720
ctccacctgt	gggtctcacc	tgctcagttt	ttgctgattt	tatggaaacag	gcattggagg	780
gtacctcagt	tcagatgtgt	catcttccct	gagaaaggct	gcagtggcct	cactgatgta	840
caagatggtc	acccccatgc	tgaaccctc	catctacagc	ctgagaaaca	gggatattaa	900
aagtgtcctg	cggcagccgc	acggcagcac	ggctcaatct	caagaccttc	ttatctgttc	960
cattcctttt	gtagtgtggg	ttaaaaaagg	cagcaaggct	aaa		1003

<210> 171

<211> 998

<212> DNA

<213> Unknown (H38g19 nucleotide)

<220>

<223> Synthetic construct

<400> 171

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tggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtatt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tcacgtcat	tgggtggtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccccctc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctggt	gcctggaccc	ttggtgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taatttacc	ttctgtggcc	ctaagtgtgt	ggacagcttc	tactgtgacc	540
ttctcgggt	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tgtaatctcc	tacatcttca	660
tcctgtttac	tgtttggaaa	cattcctcag	gtgggtcatc	caaggccctt	tccactcttt	720
cagctcacag	cacagcggtc	cttttggtct	ttgggtccacc	catgtttgtg	tatacatggc	780
cacaccctaa	ttcacagatg	gacaagtttc	tggctatttt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaaca	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttcttg	960
ttaaacaatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 172

<211> 1018

<212> DNA

<213> Unknown (H38g20 nucleotide)

<220>

<223> Synthetic construct

<400> 172

gatacagacc	cacagagtct	aacagatgtc	tctatatctc	tcctcctcga	actctcagag	60
gatccagaac	tgcagccggt	cctcgtcggg	ctgttcctgt	ccatgtgcct	ggtcacgggtg	120
ctcaggaacc	tgctcatcat	cctggccatc	agccctgact	cccacctcca	cacccccatg	180
tactttcttc	tctccaacct	gtcctttcct	gacagtcggt	tcacctccac	cacagtcccc	240
aagatgattg	tggacatcca	gtctcacagc	agagtcactc	cctatgcagg	ctgcctgact	300
cagatgtctc	tctttgcat	ttttggagac	atggaagaga	gacatgttcc	tgagtgtggt	360

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ggcctatgac cggtttttag ccatctgtca ccctttatat cgttcagcca tcttaaacc 420
ctgtttctgt ggcttcctag attcgttgct cttgtttttt tttttttttt tttctcagtc 480
tttttagactc ccagctgcac aacttgattg ccttacaaat gacctgcttc aaggatgtgg 540
aaattcctaa tttcttctgg gaaccttctc aactcccca tcttgcatgt tgtgacatct 600
tcaccaggaa catcaacctg tatttccctg ctgccatatt tggttttctt cccatctcgg 660
ggacgctttt ctcttactat aaaattgttt ccttcattct gagggtttca tcatcagggtg 720
ggaagtataa accttctccg cctgtgggtc tcatctgtca gttgtttact gagtttatgg 780
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ggcctcagtg atgtacacgg tggtcacccc catgctgaac cccttcact acagcctgag 900
aaacggggat attaaaagtg tcctgcggca gccgcacggc agcacagtct aatctcaata 960
tcttcttate tgttccattc cttttgtagt gtgggttaaa aaaggcagca aggtcaaa 1018

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<210> 173

<211> 942

<212> DNA

<213> Unknown (H38g21 nucleotide)

<220>

<223> Synthetic construct

<400> 173

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atggagacaa gaaaatactc tgccatgact gaattctttc tgggtggggct ttcccaatat 60
ccagagctcc agctttttct gttcctgctc tgccctcatca tgtacatgat aatcctcctg 120
ggaaatagcc tcctcattat catcaccatc ttggattctc gcctccatac tcccatgtat 180
ttctttcttg gaaacctctc attcttggac atctgttaca catcctcacc cattcctcca 240
atgcttatta tatttatgtc tgagagaaaa tccatctcct tcattggctg tgcctcgcag 300
atggttgtgt cccttggtct gggctccact gagggtgtcc tcctggctgt gatggcctat 360
gaccactatg tggccatctg caaccactg aggtactcca tcatcatgaa cggagtgtctg 420
tatgtgcaaa tggctgcagt gtcctggatc ataggctgtc tgacctccct attgcaaaca 480
gttctgacaa tgatgttgcc tttctgtggg aataatgtca ttgatcatat tacctgtgaa 540
attttggccc ttctaaaact tgtttgttca gatataacca tcaatgtgct tatcatgaca 600
gtgacaaaata ttgtttcact ggtgattctt ctactgttaa ttttcactc ctatgtgttt 660
attctctctt ccatcctgag aattaattgt gctgagggaa gaaagaaagc cttctctacc 720
tgttcagcgc actcgattgt ggtcatctta ttctacgggt cagccctttt tatgtacatg 780
aaacccaagt caaagaacac taatacatct gatgagatta ttgggctgtc ttatggagtg 840
gtaagcccaa tgttaaatcc catcatctat agcctcagga ataaagaggt caaagaggct 900
gtaaagaaag tcctgagcag acatctgcat ttattgaaaa tg 942

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<210> 174

<211> 958

<212> DNA

<213> Unknown (H38g22 nucleotide)

<220>

<223> Synthetic construct

<400> 174

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atgaagaata aaaggaatgt gactgaattc gttttaacag gtcttacaca gaaccctaaa 60
atggagaaaag tcatgtttgc agtatTTTTG gttctttaca tgataaact ttcaggcaac 120
ctgctccttg tggttacaat taccaccagc caggctctta gctcccccac gtacttcttc 180
ctgagccacc tttctttgat agacacagtt tattcttctt cttcagctcc taagttgatt 240
gtcgattccc ttcatgagaa gaaaatcacc tcctttaatg ggtgtatggc tcaagcctat 300
gaagaacaca tttttgggtg tactgagatc atcctgctga cagtgatggc ctgtgacaac 360
tatgtggcca tctgcaaacc tctgcaactc acaaccatca tgagccacag cctgtgcatt 420
ctcctagtgg tagtggcctg gataggagga tttctccatg caaatattca gattctatTT 480
acagtatggc tgcccttctg tggccccaat gtcatagacc acttcatgtg tgacttgtgc 540
cctttgttaa aacttgtttg cctggacact catacccttg gtctctttgt tgctgccaac 600
agtgggttca tctgcttatt aaacttctt ctctaggtgg tatectatgt gatcatcttg 660
agatgtttta agaactatat cttggagggg aggggtaaag ccctctccac ctgtatttct 720
cacatcataa tagttgtctt attctttgtg cettgtatat ttgtgtatct gcaccagtg 780
acaaactctg cccattgata aagctgctgc tgtattttat actatgggtg tcccaatgTT 840

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aaatcctttg atctacacac tcagaaatgc tgaggtaaaa agtgcaataa ggaagctttg 900
 gagaaaaaaa gttatttcag ataatgacta aataagacca ttgagcactc atcataga 958

<210> 175

<211> 933

<212> DNA

<213> Unknown (H38g23 nucleotide)

<220>

<223> Synthetic construct

<400> 175

atgaggaatt	tctcggtggt	gtccgaattc	atcctgctgg	gcacccctca	cacggagggt	60
ctggagacta	ttctgttggg	cctgtttttg	tccttctaca	tcttcaccct	tatggggaac	120
ctgctcatct	tgtctggtat	tgtctcctct	gctcggtctc	acacgcccct	gtacttcttc	180
ctgtgcaagc	tgtctgtttt	tgacctatct	ttcccttctg	tgagttcccc	taagatgctg	240
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tttgttgcca	tttgtcacc	tctacgtac	accataatca	tgagccacag	agcatgtatc	420
atcctagcca	tggggacctc	attctttggc	tgcatcagg	ccacctttct	gaccactctc	480
accttccaat	tgcttactg	tgtccccaat	gaggtggact	attatttctg	tgatatccca	540
gtcatgctga	agctggcttg	tgagataacc	tcagccctgg	agatgggtgg	gttcatcagt	600
gtgggacctc	tgccccctcag	ctgtttcctt	ctcactctca	cctcctacag	tggtacgtgc	660
ttctccatct	tgtagatctg	ctctgccgag	ggccgacgcc	gtgccttctc	cacctgcagc	720
gccccacctc	ccgccatcct	gcttttttac	atgccagtgg	tcctcattta	cctgaggcct	780
acccacagcc	tgtggttgga	tgcaactgtt	caaattctga	ataacctggg	cacccccatg	840
ctgaaccctc	taatctacag	tctcaggaat	aaggagggtga	aattatcact	aaggaaggtc	900
ttatatcagc	tgggcttctc	tcctgagcag	ttg			933

<210> 176

<211> 906

<212> DNA

<213> Unknown (H38g24 nucleotide)

<220>

<223> Synthetic construct

<400> 176

atggacatac	cacaaaatat	cacagaattt	ttcatgctgg	ggctctcaca	gaactcagag	60
gtacagagag	ttctctttgt	ggtctttttg	ctgatctatg	tggtcacggg	ttgtggcaac	120
atgctcattg	tggtcactat	cacctccagc	cccacgctgg	cttcccctgt	gtattttttc	180
ctggccaacc	tatcctttat	tgacaccttt	tattcttctt	ctatgggtcc	taaactcatt	240
gctgactcat	tgtatgagg	gagaaccatc	tcttatgagt	gctgcatggc	tcagctcttt	300
ggagctcatt	ttttgggagg	tgttgagatc	attctgtctc	cagtgatggc	ttatgaccgc	360
tatgtggcca	tctgtaagcc	cctgcacaat	actaccatca	tgaccaggca	tctctgtgcc	420
atgctttag	gggtggcttg	gcttgggggc	ttcctgcatt	cattgggtca	gctcctcctg	480
gtcctttggg	tgcccttctg	tgggccaat	gtgatcaatc	actttgcctg	tgacttgtac	540
cctttgctgg	aagtggcctg	caccaatacg	tatgtcattg	gtctgctggg	ggttgccaac	600
agtggtttaa	tctgcctgtt	gaacttcctc	atgctggctg	cctcctacat	tgatcatcctg	660
tactccttga	ggtccacag	tgcatatggg	agatgcaaag	ccctctccac	ctgtggagcc	720
cacttcattg	ttgttgccct	gttctttgtg	ccctgtatat	ttacttatgt	gcattccattt	780
tctactttac	ctatagacaa	aaatatggca	ttatttttatg	gtattctgac	acctatgttg	840
aatccactca	tttataccct	gagaaatgaa	gaggtaaaaa	atgccatgag	aaagctcttt	900
acatgg						906

<210> 177

<211> 798

<212> DNA

<213> Unknown (H38g25 nucleotide)

<220>

<223> Synthetic construct

<400> 177

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agtctgtcct	tcattgactt	ctgccattcc	actgtcatta	cccctaagat	gctgggtgaac	120
tttgcgacag	agaagaacat	catctcctac	cctgaatgca	tggtcagct	ctatttatctc	180
agtatttttg	ctattgcaga	gtgtcacatg	ttggctgcaa	tggtcgatga	ctgttatgtt	240
gccatctgca	gcccccttgc	gtacaatgtc	atcatgtcct	atcaccactg	cttctggctc	300
acagtgggag	tttacatttt	aggcattcct	ggatctacaa	ttcataccag	ttttatgttg	360
agactctttt	tgtgcaagac	taatgtgatt	aaccattatt	tttgtgatct	tttccctctc	420
ttggggctct	cctgtctccag	cacctacatc	aatgaattac	tggttctggg	cttgagtgc	480
tttaacatcc	tgatgcctgc	cttaaccatc	cttgcttctt	acatctttat	cattgccagc	540
atcctccgca	ttcactccac	tgagggcagg	tccaaagcct	tcagcacttg	cagctccac	600
atcttggtcg	ttgctgtttt	ctttggatct	gcagcattca	tgtacctgca	gccatcatct	660
gtcagctcca	tggaccagag	gaaagtgtcg	tctgtgtttt	atactactat	tgtgcccag	720
ctgaaccccc	tgatctacag	cctgaggaat	aaagatgtca	aacttgccgt	gaagaaaatt	780
ctgcatcaga	cagcatgt					798

<210> 178

<211> 954

<212> DNA

<213> Unknown (H38g26 nucleotide)

<220>

<223> Synthetic construct

<400> 178

atgggaaact	ctaatacagtc	tttcatgaca	gaatttgtcc	tgctggggct	ttctggctac	60
ccagagctag	aggccattta	ctttgtgctg	gtcctatgta	tgtatttggg	gatcctgttg	120
ggaaatggag	tcatacatcat	tgtgagtgtt	tatgacaccc	acttgcacac	ccccatgtac	180
tttttccctca	gtaactttatc	attcttggac	atctgtctaca	ctagtctatc	tattccacta	240
tttctcagca	gcttcttaac	gtcaaagaaa	actatttccct	tctctgggtg	tggagtgc	300
atgtttctct	cttttgcctat	gggagcaaca	gagtgtgtcc	ttctaagtat	gatggcgttt	360
gactgctatg	tggtccatctg	taaccctcta	tgatacccta	tcatacatgag	caaggccttca	420
tacatgtcca	tggctgcggg	gtcctggatt	ggaggaggca	tcaattctgt	gttgcaaacc	480
tcccttgcaa	tgcggcttcc	tttctgtgga	gataacgtca	ttaatcattt	tacttgtgaa	540
atcttggtcg	tcttaaaatt	ggcctgtgct	aatatctcca	taaatattat	tagcatgggt	600
gttgctagta	tgatttttct	tgtagggcca	gtacttttta	tttttgttac	atatgttttt	660
attctctcca	ccatctgag	aattccttct	gcagaaggaa	ggcacaaagc	ctcctccacc	720
tgtctgtccc	acctaacagt	ggtgattata	ttctacagaa	ccatcctttt	catgtatgca	780
aagcccaagg	ctaaagactc	ttctggtgca	gacaaagaac	aagtcacaga	caaaatcatc	840
tcctgtttct	atggagtggg	gacacctatg	cttaatcctc	ttatctatag	tttgagggaac	900
aaagacgtga	aggcagctgt	gaagagtata	ctgtgacaaa	aatgcttctt	ggaa	954

<210> 179

<211> 984

<212> DNA

<213> Unknown (H38g27 nucleotide)

<220>

<223> Synthetic construct

<400> 179

aaatctatga	aaaagatgaa	caatgtaata	gaattcatat	tgctggggct	cactcacaat	60
ccagaactgc	agaaattctt	gtttgttatg	tttttaatca	cctacttgat	cacattggca	120
ggtaacctgt	tcatactcagt	catcatcttc	atcagcccag	ccctgggttc	ccccatgtac	180
tcttttccgt	cctatttgtt	cattatagac	attttctgct	cttcttccat	agccccataa	240
atgaactttg	acttgatctc	tgaaaagaac	accatatcct	tcaatggctg	catgactcag	300
ctcttcacag	aacatttctt	tacagaacat	ttctttgagg	cagctgagat	catcttatta	360
agtgtcatgg	cctatgacca	ctatgtggcc	atccgtaagc	ccttgcaacta	tgcaaccatc	420
atgagccaac	ctatgtgtgg	attcctgatg	gtggtggctg	ggattctggg	atttgtgcat	480

ggagggatcc	agactttgtt	catagcccag	ttaccattct	gtggccccc	tgatcatcaac	540
cactttatgt	gtgatttagt	acctcttctg	gagctggcct	gcacagacac	tcacaccttg	600
gggcctctga	ttgctgcca	cagtgggtca	ctgtgtttcc	tcattttttc	catgctgggt	660
gcttcctatg	tcatactcct	gtgcttctcg	aggactcata	gctctgaagg	gcgtcgcaaa	720
gctctgtcta	gttggtgcctc	tcatactctc	attgtcatct	tattctttgt	ccctttttca	780
tacctgtatc	taagacctaa	cctccttccc	cactgacaaa	gctgtgactg	tgttttgcac	840
cctattttaca	cctatgttga	accctttaat	ctacaccctc	aaaaataaag	aagtgaaaaa	900
tgatcattaag	aagctctgga	agcaataaat	gacaactgat	gataaataag	tcttgtgaca	960
caaacattta	ggcaagaata	tctg				984

<210> 180

<211> 954

<212> DNA

<213> Unknown (H38g28 nucleotide)

<220>

<223> Synthetic construct

<400> 180

atggaatggg	aaaaccacac	cattctgggtg	gaattttttc	tgaagggact	ttctgggtcac	60
ccaagacttg	agttactctt	ttttgtgctc	atcttcataa	tgtatgtggg	catccttctg	120
gggaatggta	ctctcatttt	aatcagcatc	ttggaccctc	accttcacac	ccctatgtac	180
ttctttctgg	ggaacctctc	cttcttggac	atctgtctaca	ccaccacctc	tattccctcc	240
acgttagtga	gcttcctttc	agaaagaaag	accatttccc	tttctggctg	tgcagtgcag	300
atgttcctcg	gcttggccat	ggggacaaca	gagtgtgtgc	ttctgggcat	gatggccttt	360
gaccgctatg	tggctatctg	caacctctcg	agatatccca	tcatacatgag	taaggatgcc	420
tatgtaccca	tggcagctgg	gtcctggatc	ataggagctg	tcaattctgc	agtacaatca	480
gtgtttgtgg	tacaattgcc	tttctgcagg	aataacatca	tcaatcattt	cacctgtgaa	540
attctggctg	tcataaaaact	ggcctgtgct	gacatctcag	acaatgagtt	catcatgctt	600
gtggccacaa	cattgttcat	attgacacct	ttgttattaa	tcattgtctc	ttacacgtta	660
atcattgtga	gcatacttcaa	aattagctct	tccgagggga	gaagcaaagc	ttcctctacc	720
tgttcagccc	atctgactgt	ggtcataata	ttctatggga	ccatcctctt	catgtacatg	780
aagcccaagt	ctaaagagac	acttaattcg	gatgacttgg	atgctaccga	caaaattata	840
tccatgttct	atgggggtgat	gactcccatg	atgaatcctt	taatctacag	tcttagaaac	900
aaggatgtga	aagaggcagt	aaaacaccta	ctgaacagaa	ggttcttttag	caag	954

<210> 181

<211> 792

<212> DNA

<213> Unknown (H38g29 nucleotide)

<220>

<223> Synthetic construct

<400> 181

atggtagaca	acctaatacat	tgtggtgaca	atcaccacca	gcccagccct	ggactcccc	60
gtgtattttt	ttctgtcttt	cttttctctc	atagatggct	gtcctctctc	taccatggcc	120
cccaaaatga	tatttgactt	actcactgaa	aagaaaacta	tttccttcag	tgggtgcatg	180
accagctct	ttgtagaaca	tttctttggg	ggagttgaga	tcattctgct	cgtgggtgatg	240
gcctatgact	gctatgtggc	catctgcaag	cccctgtact	acctgatcac	aatgaacagg	300
caggtagtg	gcctcctggg	ggccatggca	tgggtcgggg	gatttcttca	cgctctgatt	360
caaatgcttt	taatagtctg	gctgcccttc	tgtggcccca	atgtcattga	ccatttcate	420
tgtgaccttt	tccctctgct	aaaactctcc	tgcactgaca	ctcacgtctt	tggactcttt	480
gttgccgcca	acagtgggct	gatgtgtatg	ctcatttttt	ctattcttat	tacctcttac	540
gtcctaatac	tctgtctaca	gcggaaggct	ctctctacct	gcgccttcca	tatactgta	600
gtcgtcctat	tctttgttcc	ctgtatatattg	gtgtaccttc	gacctatgat	caccttcctt	660
attgataaag	ctgtgtctgt	gttttatact	gtggtaaacac	ccatgttaaa	ccctttaatc	720
tacacctca	gaaacacaga	ggtgaaaaat	gccatgaagc	agctctggag	ccaaataatc	780
tggggtaaca	at					792

<210> 182

<211> 936
 <212> DNA
 <213> Unknown (H38g30 nucleotide)

<220>
 <223> Synthetic construct

<400> 182
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 gctcatcact ggatctccat ccccttcttt gctgtttatg tgtgcaccc tctgggcaat 120
 ggcattgctcc ttacacctcat caagcatgac cacagtcttc atgagcccat gtactacttc 180
 ctcaccatgc tggcaggcac agacctcatg gtgacattga ccacgatgcc tactgtaatg 240
 ggcacccat ggggtgaatca cagggagatt agcagtgtgg gctgcttctt acaggcttac 300
 tttattcact ccccttctgt tgtggaatca ggttccctcc tggcaatggc atatgatcgt 360
 ttcattgcca tccgcaatcc tttgagatat gcttccattt tcaccaatac tagagtcata 420
 gcgttaggag tgggagtgtt tctaaggggt tttgtatcca tccctgctgt aattttgcgt 480
 cttttttcat tttcatattg caaatctcat gttatcacac gtgctttctg cctccaccaa 540
 gaaatcatga gactggcttg tgctgacata actttcaata gactttaccc tgaattttg 600
 atctctttta caatcttctt agactctctg atcatcctct tctctatat tctaattctt 660
 aatactgtca taggcattgc ctctgggtgaa gagagagcca aagccctcaa tacctgtatc 720
 tcccacatta gttgtgttct tatcttctat gttacgggtga tgggtttgac attcatttac 780
 agatttggga agaattgtgc agaggttgct cacattatca tgagttacat ctacttcctc 840
 tttctcctt taatgaaccc tgctcatctac agcatcaaaa ccaagcaaat acaatatggc 900
 attatccgc ttttatctaa acataggttt agtagg 936

<210> 183
 <211> 854
 <212> DNA
 <213> Unknown (H38g31 nucleotide)

<220>
 <223> Synthetic construct

<400> 183
 gacacagagc cacagaatct cacagctgtc tcagaattcc tctctctggg actctcagag 60
 gatccagaac tgcagcccat cctcgtctgg ctcttctgt ccatgtacct ggtcacgggt 120
 ctgggggaacc tgcctcattat cctggccatc ggctctgact cccacctcga ccccccatg 180
 tacttcttcc tctccaacct gtcttgcct gacatcggtt tcacctcggc cacgggtccc 240
 aagatgattg aggagatgca atcgcatagc agagtcattc accatgggga ctgctgacac 300
 agatgtcttt ctttgcctt tttgcatgta aggatgacat gatcctgact gtgatggcct 360
 atgactgggt tgtggccatc tgtcaccccc tgaactaccc aggcattcat aatcctcacc 420
 tctgtgtctt attagttttg gtgccttttt tcttagcct gttggattcc cagctgcaca 480
 atttgattgt gttacaattc atctgcttca agaattgtga aatctcta ttttctgtg 540
 acccgtttca acgtctcaac cttgcctgtt ctgacagtga catcaataac atatacatat 600
 atttagatag tactatattt ggttttcttc gcatttccagg gatccttttg tgttactata 660
 cagttgtctt cccatttcta agaattccat cctcagatgg gaattataaa gccttctcca 720
 cctgaggctc tgcctggca gttgtttgct tattttatgg aacaggcatt ggctgtacc 780
 tgacttccgc tgtgtcatca tccccagga atgatgtggg ggcgtcagta atgtacgctg 840
 tgggtggtcac cccc 854

<210> 184
 <211> 951
 <212> DNA
 <213> Unknown (H38g32 nucleotide)

<220>
 <223> Synthetic construct

<400> 184
 atgggtgaga ttaaccagac acttgtgtca gaatttcttc ttctgggtct ttctggatac 60
 ccaagattg agattgttta cttgtctctc attctagtta tgtacctagt gattctaatt 120

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ggcaatggtg ttctaatacat agccagcacc tttgattctc attttcacac accaatgtac 180
ttcttccctgg gcaacctctc ttctctggat atctgctata catcctcctc tgttccctca 240
acattgggtga gcttaatactc aaagaaaaga aacatttcct tctctggatg tgcagtgcag 300
atgttctttg ggtttgcaat ggggtcaaca gaatgtctgc ttcttggcat gatggcattt 360
gatcgttatg tggccatctg caaccctctg agatacccca tcatcctgag caagggtggcg 420
tatgtattga tggcttctgt gtcctggctg tccgggtggaa taaattcagc tgtgcaaaca 480
ttacttgcca tgagactgcc tttctgtggg aataatatta tcaatcattt cgcagtgtgaa 540
atattagctg tcctcaagct ggcctgtgct gatatatccc tcaatattat caccatgggtg 600
atatcaaata tggccttcct ggttcttcca ctgatggta tttttttctc ctatatgttc 660
atcctctaca ccactctgca aatgaattca gccacaggaa gacgcaaggc attttccacg 720
tgctcagctc acctgactgt ggtgatcata ttttacggta ccactctctt tatgtatgcg 780
aaaccgaagt ctcaagacct gattggggaa gaaaaattgc aagcattaga caagctcatt 840
tctctgtttt atggggtagt gacacccatg ctgaatccta tactctatag cttgagaaat 900
aaggatgtaa aagctgctgt aaaatatattg ctgaacaaaa aaccaattca c 951

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<210> 185

<211> 927

<212> DNA

<213> Unknown (H38g33 nucleotide)

<220>

<223> Synthetic construct

<400> 185

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atgcagcata catgctttgt ggtattcttc ctctttcatg tgctcactgt cctggggaac 120
cttctgggtca tcatcaccat caatgctaga aagaccctga agtctcccat gtatttcttc 180
ctgagccagt tgtcttttgc tgacatatgt tatccatcca ctaccatacc caagatgatt 240
gctgacactt ttgtggagca taagatcacc tccttcaatg gctgcatgac ccagctcttt 300
tctgcccact tctttgggtg cactgagatc ttctctctta cagccatggc ctatgaccgc 360
tatgtggcca ctgtaggcc cctgcactac acagccatca tggattgccg gaagtgtggc 420
ctgctagcgg gggcctcctg gttagctggc ttctgtcatt ccactcctga gaccctcctc 480
acgggttcagc tgcccttttg tgggcccatt gagatagaca acttcttctg tgatgttcat 540
cccctgctca agttggcctg tgcagacacc tacatggtag gtctcatcgt ggtggccaac 600
agcgggtatga tttcttttagc atcctttttt atccttatca tttcctatgt tatcatctta 660
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cacgtaatac ctgtcctttt ggttctcatg cccccatgt tcatgtacat tcgtccctcc 780
accacctggt ctgctgacaa acttatcacc ctctttaaca ttgtgatgcc acctttgctg 840
aaccctttga tctatacact aaggaacaac gatgtgaaaa atgccatgag gaagctgttt 900
agggtaaga ggagcttagg ggagaag 927

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<210> 186

<211> 987

<212> DNA

<213> Unknown (H38g34 nucleotide)

<220>

<223> Synthetic construct

<400> 186

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ctggaggcaa cttatcactc gatctccatc cccttctttg ctgtttatgt gtgcgtcctt 120
cttggcaatg gcaagctcct ctacctcatc aagcatgacc acagtcttca cgaacctatg 180
tactgtttcc ttgccacact gaggcaagac ctcatggtga aattgacctat gatgccact 240
gtaatgggcg tcttgtggat gaatcacaac gaggttatcc atggggcctg cttcttgacg 300
gtttacatta tccactccca ttatccactt gcagaatcag gtattctcct gtcaatggcc 360
tatgaccgtt tcattatcat ccacatgctt ctgaggtata actctatctc tactaaatct 420
tgggtgaaga tagaactgtg gctatttatg agggactttt tatccctcgt gcctccaatt 480
ctgccactcc attgcttccc atattgtcat tcccattgtt tcttccacac cttttttctc 540
catcaagatg tcctgaaact tgcctgtgct gatattacat tcaatcactt ataccagct 600
attctgggtg ctttgatttt cttcctagac gctctgatca ttgtcttttc ttatatcctg 660

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atccttaaaa	cagttatagg	tattgacctc	agaaaagagc	aagccaaagc	tctcaacatg	720
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attcacagg	ttgggaaaca	tgcaccacat	gtgggtgcaca	ttaccgtgag	ctaagtactc	840
atttcttttt	cctccattca	tgaaccttat	tatatacagc	atcaaaccac	gcagatccaa	900
agaagcattg	ttcgccattt	ttctgggcac	agaatggctt	gagccctttt	ttcagaattt	960
tgtgatcttc	atgatttctg	ggccttt				987

<210> 187

<211> 887

<212> DNA

<213> Unknown (H38g35 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(887)

<223> n = A,T,C or G

<400> 187

ctgctgctcc	tgggtgctcc	gctgcccacg	ttcctgctga	gtcttntggg	gaacntgctc	60
atcatctcca	ctgtgctgtc	ctgctcccgc	ctccacaccc	ccatgacttc	ttcttgtgca	120
acctctctat	cctggacatc	ctcttcacct	cagtcacttc	tccaaaagtg	ttggccaact	180
taggatctag	ggataaaaacc	atctcctttg	cgggatgtat	caccagtgct	tatttctact	240
ttttcttggg	cacagttgag	ttcctcctgc	tgacggtcac	gtcctatgac	tgctatgccg	300
ccatctgctg	ccccctggcg	tacaccacca	tcagtgcacc	ttatgtctgc	attgggaccg	360
ttgtgttctc	ttgggtggga	ggcttctctg	ctgtgctctt	tccaaccatc	ctcatctccc	420
agctgccctt	ctgtggctcc	aatatcatta	accacttctt	ctgtgacagt	ggacccttgc	480
tggccctggc	ctgtgcagac	accactgcca	tgcagctgat	ggattttatg	ctttcttcca	540
tggtcaccc	ctgtgcata	gtcctcgtgg	cctattccta	tacgtacatc	atcttgacca	600
taatgcgcac	tccttctgca	agtgggaagga	agaaggcctt	taataacctg	gcttcccacc	660
tgaccatagt	catcatttct	agtggcatca	ctgtgtttat	ctatgtgact	ccctcccaga	720
aagaatatct	ggagatcaac	aagatccctt	cggttctgag	cagtttggtg	actccattcc	780
tcaacccctt	tatatatact	ctgaggaatg	acacagtgca	gggagtcttc	agggatgtgt	840
gggtcagggg	tgcaggagtt	ttcgaaaaga	ggatgagggc	agtgctg		887

<210> 188

<211> 930

<212> DNA

<213> Unknown (H38g36 nucleotide)

<220>

<223> Synthetic construct

<400> 188

atgtgggtata	acaacagtg	tggcccttc	ttgctgactg	gcttcttggg	ctcagaggca	60
gttcactacc	ggatctctat	gtccttcttt	gtcatctact	tctccgtcct	ttttggaaat	120
ggcactcttc	ttgtctctat	ttggaatgat	cacagcctcc	atgagcccat	gtactacttc	180
ctggctatgc	tggcagacac	ggaccttggg	atgacattca	ctacaatgcc	cacagtcctg	240
gggtgctctg	tgctagacca	gagggagatt	gcccatgctg	cctgtttcac	ccaatccttc	300
attcattcac	tggccattgt	agaatcaggt	atcttgcctg	ttttggccta	tgactgtttc	360
attgccatcc	gcacaccact	gaggtacaac	tgcattctta	ccaattcccg	agtgatgaac	420
ataggactgg	gggtactgat	gagaggtttt	atgtccattt	tgcccataat	tctttcactc	480
tactgtctacc	catattgtgg	ttcccgtgcc	ctcttgcaca	cattttgcct	ccatcaagat	540
gtcataaaac	tcgcctgtgc	tgatatcagc	tttaatcaca	tatatccaat	tattcagact	600
tctttgactg	tctttttaga	tgctctaate	atcatctttt	cttatatact	aatccttaag	660
acagtgatgg	gcattgcgtc	tggacaagag	gaagctaaat	ctctcaacac	ttgtgtctcc	720
catattagct	gtgtcctagt	atttcacatc	actgtgatgg	gactgtcatt	cattcacagg	780
tttgggaaac	atgcacctca	tgtgggtccc	attaccatga	gctatgtcca	ttttctcttt	840
cctccattcg	tgaatcctat	catttatagc	atcaagacca	agcagattca	aagaagcatt	900
attcgccctat	tttctgggca	gagtgggct				930

<210> 189
 <211> 996
 <212> DNA
 <213> Unknown (H38g37 nucleotide)

<220>
 <223> Synthetic construct

<400> 189
 cacacagagc cacggaatct cacagggtgtc tgagaattcc tcctccttgg actcccagag 60
 gatccagaac tgcagccggt tctcgctttg ctctccctgt ccctgtccat gtatctggtc 120
 acggtgctga ggaacctgct catcatcctg gctgtcagct ctgtctctcc cctccacacc 180
 cccatgtact tcttctcttc caacctgtgc tgggctgaca tcgggtttcac ctcgggccacg 240
 gttcccaaga tgattgtgga catgcagtcg catagcagag ccatctctca tgcgggctgt 300
 ctgacgcaga tgtcttttct gttccttttt gcattgtatag aaggcatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctgc actaccagc catcgtgaat 420
 cctcacttct gtgtcttctt cgttttgggt tcctttttcc ttagcctgtt ggattcccag 480
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 gtctgtgacc cctctcaact tctcaaactt gcctgttctg acggcgctcat caatagcata 600
 ttcataatatt ttgatagtag tatgtttggg ttcttcccca ttccagggat cctatgggtct 660
 tactataaaa tcgtcccttc cattctaagg atttcacgt cagatgggaa gtataaagcc 720
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 atgtacctga cttcagctgt gtcaccacce ccaggaatg gtgtgggtggc atcattgata 840
 tacgtgtgtg tcactcccat gctgaacctt ttcatctaca gcctgagaaa cagggacata 900
 caaagtgcc tgcggaggct gctcagcaga acagtcgaat ctcatgatct gttccatcct 960
 ttttcttggg ggggtgagaaa gggcaaccac attaaa 996

<210> 190
 <211> 930
 <212> DNA
 <213> Unknown (H38g38 nucleotide)

<220>
 <223> Synthetic construct

<400> 190
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 aggattcaga tgctctcttt tgggctcttc tcctgtttct acgtcttcac cctgctgggg 120
 aacgggacca tactggggct catctcactg gactccagac tgcaagcccc catgtacttc 180
 ttctctctac acctggcggt cgtcgacatc gcctacgcct gcaacacggg gccccggatg 240
 ctgggtgaacc tcctgcatcc agccaagccc atctcctttg cgggcccgcac gatgcagacc 300
 tttctgtttt ccacttttgc tgtcacagaa tgtctcctcc tgggtggtgat gtcctatgat 360
 ctgtacgtgg ccatctgcca cccctccga tatttggcca tcatgacctg gagagtctgc 420
 atcaccctcg cgggtgacttc ctggaccact ggagtccttt tacccttgat tcatcttggt 480
 ttactttctac ctttaccctt ctgtaggccc cagaaaattt atcaactttt ttgtgaaatc 540
 ttggctgttc tcaaaactgc ctgtgcagat accacatca atgagaacat ggtcttggcc 600
 ggagcaattt ctgggctggg gggacccttg tccacaattg tagtttcata tatgtgcac 660
 ctctgtgcta tccttcagat ccaatcaagg gaagttcaga ggaaagcctt ccgcacctgc 720
 ttctcccacc tctgtgtgat tggactcgtt tatggcacag ccattatcat gtatgttggg 780
 cccagatatg ggaaccccaa ggagcagaag aaatatctcc tgctgtttca cagcctcttt 840
 aatcccatgc tcaatccctt tatctgtagt cttaggaact cagaagtga gaatactttg 900
 aagagagtgc tgggagtaga aagggtctta 930

<210> 191
 <211> 968
 <212> DNA
 <213> Unknown (H38g39 nucleotide)

<220>
 <223> Synthetic construct

<400> 191
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 gatccagaac tgcagcccggt cctcgctggg ctgaccctgt ccatgtacct gggtcacgggtg 120
 ctgaggaacc tgctcatcat cctggctgtc agctctgact cccacctcca cacctccatg 180
 tacttcgtcc tctccaacct gcgctgggtt gacatcggtt tcacctcggc cacgggttccc 240
 aagatgattg tggacatgca gtcgcatagc agagtcattt cttatgcggg ctgcctgaca 300
 cagatgtctt tcttggtctt ttttgcatgt atagaagaca tgctcctgac tgtgatgtcc 360
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 acctgtggct ctccactggc agttttttgc ttattttacg gagcaggcat tggcgtgtac 780
 ctgacttcag ctgtgtcacc accttcgggc aatggtgtgg tggcttcagt gatgtacact 840
 gtggtcacc ccatgctgaa ccttttcacg tacagcctga gaaacagggg cattcaaagt 900
 gccccgtgga ggctgctgag cacaacagtt gaatctcatg atctcttcca tcctttttct 960
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<210> 192

<211> 960

<212> DNA

<213> Unknown (H38g40 nucleotide)

<220>

<223> Synthetic construct

<400> 192
 cacacagagc cacagaatct cacaggtgtc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagcccat cctggctggg ctgtccctgt ccatgtatct gggtcacgggtg 120
 ctgaggaacc tgctcatcat cctggctgtc agctctgacc cccacctcca ccccccatg 180
 tgcttcttcc tctccaacct gtgctgggtt gacatcggtt tcaccttggc cacgggttctt 240
 aagatgattg tggacatgca gtctcatacc agagtcattt cttatgaggg ctgcctgaca 300
 cggatatctt tcttggtcct ttttgcatgt atagaagaca tgctcctgac tgtgatggcc 360
 tatgactgct ttgtagccat ctgtcgccct ctgcactacc cagtcacgtt gaatcctcac 420
 ctctgtgtct tcttcctttt ggtatacttt ttccttagct tgttggtatt ccagctgcac 480
 agttggattg tgttacaatt caccatcatc aagaatgtgg aaatctctaa ttttgtctgt 540
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 gtggtcacc ccatgctgaa ccttttcacg tacagcctga gaaacagggg catacaaagt 900
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<210> 193

<211> 980

<212> DNA

<213> Unknown (H38g41 nucleotide)

<220>

<223> Synthetic construct

<400> 193
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 gatccagaac tgcagccgggt cctcgctggg ctgttcctgt ccatgtgcct gggtcaagggtg 120
 ctggggaacc tgctcatcat cctggccatc agccctgact cccacctcca ccccccatg 180
 tacttcttcc tctccaacct gtccttgccct gacatcggtt tcacctccac catgggtcccc 240
 aagatgattg tggaatccaa tctcacagca gagtcatctc ctatgcaggc tgcttgactc 300
 agatgtctct ctttgccatt tttggaggca tggaagagag acatgctcct gagtgtgatg 360

gcctatgacc	ggttttagc	catctgtcac	cctctatata	attcagccat	catgaaccog	420
tgtttctgtg	gcttcctagt	tttgctgtct	tttttttctt	tctttttctc	agctgcacaa	480
cttgattgcc	ttaaaaaatga	cctgcttcaa	gaatgtggga	attcctaatt	tcctctgtga	540
cccttctcaa	ctcccccatc	tcacatgttg	tgacaccttc	accaatcaca	taatcatgta	600
tttccccgct	gccatatttg	gttttcttcc	catctcgggg	acccttttct	cttaccatgt	660
aattgtttcc	tccattctga	gggtttcatc	atctgtggga	ggtgtaaagc	cttccccatc	720
tgtgagttgt	ttgctgatat	tatggaacag	gctttggagg	gtacctcagt	tcagatgtgt	780
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tgaacccctt	catctacagc	ctgagaaaca	gggatattaa	aagtgtcgtg	cagcgccgcg	900
atggcagcac	ggtctaattc	caatatcttc	ttatctgttc	cattcctttt	gtagtgtggg	960
ttaaaaaagg	cagcaaggtc					980

<210> 194

<211> 939

<212> DNA

<213> Unknown (H38g42 nucleotide)

<220>

<223> Synthetic construct

<400> 194

atgggaaact	ggagcactgt	gactgaaatc	accctaattg	ccttcccagc	tctcctggag	60
attcgaatat	ctctcttcgt	ggttcttctg	gtaacttaca	cattaacagc	aacaggaaac	120
atcaccatca	tctccctgat	atggattgat	catcgccctg	aaactccaat	gtacttcttc	180
ctcagtaatt	tgtcctttct	ggatatctta	tacaccactg	tcattacccc	aaagttgttg	240
gcctgcctcc	taggagaaga	gaaaaccata	tcttttctg	gttgcatgat	ccaaacatat	300
ttctacttct	ttctggggac	ggtggagttt	atcctcttgg	cggtgatgtc	ctttgaccgc	360
tacatggcta	tctgcgaccc	actgcactac	acggtcatca	tgaacagcag	ggcctgcctt	420
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gtgacaaggc	taccttactg	taggaaaaga	attaatcatt	tcttctgtga	cattgcccct	540
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gcccttgta	tcttgagctc	cctggcattc	actactgggt	cctacgtgta	cataatttct	660
accatcctgc	gtatccccct	cacccagggc	cgtcagaaag	ctttttctac	ctgtgcttct	720
cacatcactg	ttgtctccat	tgccacaggg	agcaacatct	ttgtgtatgt	gagacccaat	780
cagaactcct	cactggatta	tgacaagggt	gccgctgtcc	tcatcacagt	ggtgacccct	840
ctcctgaacc	cttttatcta	cagcttgagg	aatgagaagg	tacaggaagt	ggtgagagag	900
acagtgaaca	gaatcatgac	cttgatacaa	aggaaaact			939

<210> 195

<211> 737

<212> DNA

<213> Unknown (H38g43 nucleotide)

<220>

<223> Synthetic construct

<400> 195

atgggaaata	tcaacataag	tcttgaaaat	tactttattc	tactgggtct	ttctaattga	60
cctcctctgg	aaatagttat	ttttgtagtt	ctcttgatat	tctgcttcat	gacactgata	120
ggcaagctgt	tcagcatcat	tctgtcatat	ctggactccc	atccccacac	tctcggtact	180
tattctcttt	tctggatttc	tgctacacca	tcagttccat	cttttaatta	cagtacaatc	240
tctggggccc	acagaagaac	atctcttatg	ccagtgggtat	gattcaaatt	tattttgttc	300
tcacactggg	aaccatggat	tgcgctctac	tggtgggtgat	gtccaggact	gtgatgcagc	360
tggacacaga	cacttgcttt	atactgttgt	tatggctgtg	gctttttggg	taagtagctt	420
taccaactca	gcatttgatt	ccttttttac	cttctgggta	accctgtgtg	gacatcacta	480
ttatgcttac	atctttatat	ttacatcatt	gttagtataa	agatggttca	ttaacagaaa	540
gaaacagtct	gtgttctcac	tgaatcatgc	agctttatta	acattatctt	ttccattata	600
aatgactgc	ttccaggaga	ttgaaaagaa	catgttaaga	aaagcacagc	attggagaat	660
ctgaaagcat	gtgatcttgt	tcaattaaac	caagtatcaa	aaacatgcat	ttttatgaga	720
ctatttttagg	aaattca					737

<210> 196
 <211> 949
 <212> DNA
 <213> Unknown (H38g44 nucleotide)

<220>
 <223> Synthetic construct

<400> 196
 gacatccaaa atcagaccac agtgactgag tttaccctga cggcctttcc ggttcttcag 60
 cagcttcaaaa tttccctttt ggcagtcctc tggtttactt atatgcttac tctaacagga 120
 aacgttgcca tcatttcctt aacatgtgcg aatcatcgcc tccaaacccc aatgtacttc 180
 ttcctcagta attggtcaat ttgggacatt tttttcacca cctcagttat cccaaagcta 240
 ttagcctgtc tcctgcagga caagaagacc atatccttgg ctgggtgcat caccctaaact 300
 tatttccttg gttttctggg ggacagtggg gtttatectc tgggcagtga tgtcctttga 360
 ctgctacgtg gccatctgtg acccctgca ctacaccatt atcatgaaca gcagggcctg 420
 cctcctacta gttctgggct gctgggttgg agccttcctg tctgtgttgt gcccaaccat 480
 tgtgggtgtc agattgcctt tctgttataa ggaaattagt cacttcttct gtgacatcac 540
 ccctctgcta catgtgtcct gtatagacac tcatttcac gagatgataa acttctctct 600
 atcttccctc atcctcctga cctcactggg gctcaccact gtgtcctaca tctacatcat 660
 ttctaccatc ctgcacatcc cctcagccca aggacgtcgg aaggcctttt ccacgtgcgc 720
 ttccacatc accgtcattt ccacgtctta tataagcaac atcttcaggt atgtgagggc 780
 cagccagagt cattcaatgg gttttgacaa ggtgacagct gtccccaca tggtagaccc 840
 tcttctgaat cccttcactt atagtctaag aaatgaaaag gtaaaggcag tcttgaaaga 900
 agcagtcagc aaaattatgt cctcatggca caggagaact taaaacttt 949

<210> 197
 <211> 930
 <212> DNA
 <213> Unknown (H38g45 nucleotide)

<220>
 <223> Synthetic construct

<400> 197
 atggaaccac agaaccac acaggatatca atgtttgtcc tcttaggggtt ttcacagacc 60
 caagagctcc agaaattcct gtcccttctg ttcctgttag tctatgttac caccattgtg 120
 ggaaacctcc ttatcatggg cacagtgact tttgactgcc ggctccacac acccatgtat 180
 tttctgtccc gaaatctagc tctcatagac ctctgtatt ccacagtcac ctctccaaag 240
 atgctgggtg acttcctcca tgagaccaag acgatctcct accagggctg catggcccag 300
 atcttcttct tccacctttt gggagggtggg actgtctttt ttctctcagt catggcctat 360
 gaccgtaca tagccatctc ccagcccctc cggatgtgca ccatcatgaa cactcaattg 420
 tgtgtgggccc tggtagtagc cgctgggtg gggggctttg tccactccat tgtccaactg 480
 gctctgatac ttccactgcc cttctgtgac cccaatatca tagataactt ctactgtgat 540
 gttccccaag tactgagact tgccctgact gatacctccc tctggaggt cctcatgatc 600
 ttcaacagtg ggctgctagt tatcatctgg ttcctcctcc ttctgatctc ttatactgtc 660
 atcctgggtga tgctgaggtc ccactcggga aaggcaagg ggaaggcagc ttccacctgc 720
 accacccaca tcatcgtggg gtccatgata ttcatcctc gtatctatat ctatacctgg 780
 cccttcaccc cattcctcat ggacaaggct gtgtccatca gctacacagt catgaccccc 840
 atgctcaacc ccatgatcta caccctgaga aaccaggaca tgaaagcagc catgaggaga 900
 ttaggcaagt gcctagtaat ttgcaggagg 930

<210> 198
 <211> 932
 <212> DNA
 <213> Unknown (H38g46 nucleotide)

<220>
 <223> Synthetic construct

<400> 198

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gaccaagaaa atcagacttc tgaagtcacc ttcacccctc tgggcttctc agaatatcca      60
gaccttcaga cgcccctgtt cctgggtgtc ctgaccatct acacagtcac tgtgctgggg      120
aatctgggca tgatcatagt catcaggatc agcccaaac tccacacccc catgtgcttt      180
ttcctcagcc acttgctcct tgttgatttc tgttattcca ccacaattac acccaaaactg      240
ctggagaact tgggtgtgga agatagaact atctccttca caggatgcac catgcagtta      300
ttctttgtct gcatatttgt agtaacagaa acattcatgc tggcagtgat ggcctatgac      360
cgatatgtgg cgggtgtgta cctccttctc tacacagttg caatgtacca gaggctttgc      420
tccttgtagg tggctacatc atactgttgg gggatagtct gttccctgac acttacctag      480
tttctactgg aattatcctt cagaggaaat aatatcatta ataactttgt ctgtgagcac      540
tgtgccattg ttgctgtgtc ttgctctgac ccctgtgtga gccaggagat cactttagtt      600
tctgccacat tcaatgaaat aagcagcctg ctccctatgc tttcattttt atcactgtca      660
tgaagacgcc ttccactggg gggcgcaaga aagcgttctc cacgtctgcc tcccacttga      720
cggccattac cattttccat gggactatcc ttttctctca ctgtgttctt aactccaaaa      780
gttcgtggct catggtaag gtggcctctg tcttttacac agtggtcatt cccatgctga      840
accccttgat ctatagcctc aggaacaaaag atgtaaaaga gacagttagg aggttactca      900
ttaccaaatt attatgtctc atattataaa at                                     932

```

<210> 199

<211> 1000

<212> DNA

<213> Unknown (H38g47 nucleotide)

<220>

<223> Synthetic construct

<400> 199

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tatgcagacc cacagaatct aacagatgtc tctatatctc tctcctaga agtctcaggg      60
gatccagaac tgcagccagt ccttgctggg ctgttccgtg ccatgtgcct ggtcacgggtg      120
ctggggaacc tgcctcatcat cctggccatc agccctgact cccacctcca ccccccatg      180
tacttcttcc tctccaacct gtccctgcct gacatcggtt tcacctccac cacgggtcccc      240
aagatgattg tggacatcca gtctcacagc agagtcactc cctatgcagg ctgcctgact      300
cagatgtctc tctttgccat ttttggaggc atggaagaga gacatgctcc tgagtgtgat      360
ggcctatgac tggttttagg ccatctgtca cccgctatat cattcaccat catgaaccgg      420
tgtttctgtg cctttctagt ttgtttgtct ttttttttct cagtctttta gactcccagc      480
tgcacaactt gattgcctta caagtgcct gcttcaagga tgtggaaatt cctaatttct      540
tctgtgaccc ttctcaactc tcccatcttg catgttgtga caccttcacc attaacataa      600
tcatgtattt ccctgtctgc atatttgggt ttcttcccat cttggggacc cttttctctt      660
tctctaataa tgtttccctc attctgaggg tttcttcac aggtgggaag tataaagccc      720
tctccacctg tgggtctcgc ctgtcagttg tttgctgagt ttatggaaca ggcgttggag      780
ggtacctcag ttcagatgtg tcatcttccc ccagaaaggg tgcagtggcc tcagtgatgt      840
acacactggg ccccccatg ctgacccctc tcatctacag cctgagaaac agggatatga      900
aagggtgtcct gcggcagccg cagggcagca cagtctaate tcaatatctt atctgttcca      960
ttcctttgta gtgtgggttc aaaaaggcag caaggtcaaa                                     1000

```

<210> 200

<211> 921

<212> DNA

<213> Unknown (H38g48 nucleotide)

<220>

<223> Synthetic construct

<400> 200

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atggaaacag ggaacctcac gtgggtatca gactttgtct tcttggggct ctgcagact      60
cgggagctcc agcgtttcct gtttctaata ttctgtttg tctacatcac cactgttatg      120
ggaaacatcc ttatcatcat cacagtgaac tctgattccc agctccacac acccatgtac      180
tttctgtccc gaaacctggc tgtcctagac ctctgtttct cttcagtcac tgtcccaaaa      240
atgctagtgg acctcctctc tgagaagaaa accatctctt accagggtcg catgggtcag      300
atcttcttct tccacttttt gggaggtgcc atggcttctt tccctctcagt gatggccttt      360
gaccgcctca ttgccatctc ccggccctc cgctatgtca ccgtcatgaa cactcagctc      420
tgggtggggc tgggtgtagc cacctgggtg ggaggctttg tccactctat tgtccagctg      480

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gctctgatgc	tcccactgcc	cttctgtggc	cccaacattt	tggataactt	ctactgtgat	540
gttccccaag	tactgagact	tgcttgcact	gacacctcac	tgctggagtt	cctcaagatc	600
tccaacagtg	ggctgctgga	tgctgtctgg	ttcttctctc	tcctgatgtc	ctactttatc	660
atcctggtga	tgctgaggtc	acatccaggg	gaggcaagaa	ggaaggcagc	ttccacctgc	720
accacccaca	tcctcgtggt	ttccatgac	ttcgttccaa	gcatttacct	ctatgcccgg	780
cccttcactc	cattccctat	ggacaagctt	gtgtccatcg	gccacacagt	catgaccccc	840
atgctcaacc	ccatgatcta	tacctgagg	aaccaggaca	tgccaggcagc	agtgagaaga	900
ttaggggagac	accggctggt	t				921

<210> 201

<211> 947

<212> DNA

<213> Unknown (H38g49 nucleotide)

<220>

<223> Synthetic construct

<400> 201

cacacagagc	cacagaatct	cacagatgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggg	cctcgttttg	ctctccctgt	ccctgtccat	gtatctgggc	120
atgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgtctctcc	cctccacacc	180
cccacctgtg	ctgggctgac	atcggtttca	ccttggccac	ggttcccaag	atgattgtgg	240
acatgcagtc	gcatagcaga	gtcatctctc	atgcgggctg	tctgacgcag	atgtctttct	300
tcatectttt	tgcatgtata	gaaggcatgc	tcctgactgt	gatggcctat	gactgctttg	360
tagccatctg	tcgccctctg	cactaccagg	tcatectgaa	tcctcacctc	tgtgtcttct	420
tcgttttggg	gtcctttttc	cttagccctgt	tggattccca	gctgcacagt	tgaattgtgt	480
tacaattcac	catcatcaag	aatgtggaaa	tctctcattt	tttctgtgac	ccctctcaac	540
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ctatgttttg	ttttcttccc	atttcaggga	tcctatgggc	ttactataaa	atcaccct	660
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acctagcagt	tgtttgetga	ttttatgtaa	caggcattgg	catgtacctg	acttcagctg	780
tgctcaccacc	ccccagcaat	gggtgtagtg	cgtcagtgat	gtatgctgcg	gtcactccca	840
tgctgaaccc	tttcatctac	agcctgagaa	acagggacat	acaaagtgcc	ctgcggaggg	900
tgctcagcag	aacagtcgaa	tttcatgac	tgttccatcc	ttttct		947

<210> 202

<211> 369

<212> DNA

<213> Unknown (H38g50 nucleotide)

<220>

<223> Synthetic construct

<400> 202

atgtctggct	ccccactca	actgacagca	ggccccagga	cagccagtgg	ctgtgtcatc	60
atgatctgct	ttgccctcac	tgtcctctct	tacatccgca	tcttggccac	agtggttcag	120
atccgttcag	cagccagccg	ccggaaggcc	ttctccacct	gttcttccca	cctgggcatg	180
gtgctcctgt	tctatggcac	cggcagctcc	acctacatgc	gaccaccacc	ccgctactcc	240
ccgctggaag	ggcgcttggc	tgctgtcttc	tactccatcc	tcataccacc	cctgaatccg	300
ctcatctaca	gcctgaggaa	ccaggacatg	aagagagccc	tgtggaagct	ctatctccag	360
gtgccatac						369

<210> 203

<211> 1068

<212> DNA

<213> Unknown (H38g51 nucleotide)

<220>

<223> Synthetic construct

<400> 203

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atgatcaatg atagccactt cagtgggttt atactccttg gattcacagg gcagcctcag      60
cttcagatga tgatctctgg ggttgtcttt ttcttctaca ctattgcctt catgggaaat      120
atggccatca tcttattgtc ttctctagat gaccatctcc aagtcctccat gtacttcttc      180
cttagaaaatt tggccatctt ggatctctgt tataccacaa atatagtccc acaaatgttg      240
gtcagtatct ggggcaaaga caaaagaatt accttgggtg ggtgtgcctt tcaacttttc      300
attgatgtgg cactgtactc agttgaatgc atccttctgt ccatgatgtc atatgatcga      360
ctcaatgcta tctgcaagcc tctgcatcat atgaccataa tgaacctcca actctgccag      420
ggccttgtgg tcatctcctg ggtagtgggt gtgattaatt gcatcatacc ttccccttat      480
gccacgagtc ttctctgatg taggaaccac cacctagacc acttttttgt gtgtgtgaaa      540
tgtctgcaat gatcaagatt caagattgca tgtgtggaca ccacagccat ggaggttaacc      600
acatttgcca tggtcctgat tatagtctct gtctctcttc ttcttattct tgtgtcatat      660
ggtttcattg ctgtggctgt actcaagatc aagtctgcag caggaagaca aaaagcattt      720
gggacctgtt cctcccatct cgttgtggta tccatcttct gtgggacagt tacatacatg      780
tatatacagc caggaaacag tccaaatcag aatgaggggca aacttctcag tatattttac      840
tccattgtta ctcccagctt gaacccatta atttatacgg taaggaataa ggagttcaag      900
ggggccatga agaggctaac tggaaaagaa aaagattgca tggaaaaaag aggacattga      960
ttcttctctc cagcaatttc taatatggca attgatcttc ccaatctaaa atgtagacaa     1020
tttattttgt aaataaattg tctacacctg agataaagat aatatcca     1068

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<210> 204

<211> 949

<212> DNA

<213> Unknown (H38g52 nucleotide)

<220>

<223> Synthetic construct

<400> 204

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atgatcaatg atagttactt tggttggctt atgctccttg ggttccctgg gaagcctcag      60
ctggagatga tcatctctgg ggttgtcttt ttcttctatg caatttcttt gatgggaaat      120
atggctctta tctgtctgcc attactggat aaacatctcc aaaccccat atatttcttt      180
cttagaaaatc tggctatctt ggatctttgt tacaccacaa atatagtccc acagatgttg      240
gtcaatgcct ggggtaaaga caagaaaatc acttttgggtg gctgtgcttt tcaacttttc      300
actaatgtga cgctatgcac ggttgaatgt atgcttcttg ctgtgatgtc atatgaccca      360
ttcaatgctg tctgcaagcc tctggactat atgaccataa tgaaccccca actctgtcaa      420
ggcctgggtg ccatgacctg gtttaattgg gtactaatt gcatgatact ttcccctgt      480
cctgtgagtc ttctctgatg cggagaccac cacctggatc actatttttg tgaaatatct      540
gcaatgggtca aaattgcatg tggggctacc acagtcatgg aggaaaaacc ttatttgcac      600
tgtgttgttg ttgttgtttt catttctctt gcactacttc ttctcattct tgtgtcatat      660
ggcttcattg ctgtggctgt actcaagatc aagtctgcag caggaagaca aaaagcattt      720
gggacctgtt tctcccatct cattgtggta tccatcttct atgggactgt tagatatatg      780
tatatagagc caggaaacag tccatctcag gatgaggggca aacttctcca tatattttac      840
tccattgtta ctcccacctt gaacccatcc cactaaggaa taaggagtgc aagtgggcca      900
tgaaaaggct tattggaaaa gaaaaagggt ctggagacac aatagggtca      949

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<210> 205

<211> 936

<212> DNA

<213> Unknown (H38g53 nucleotide)

<220>

<223> Synthetic construct

<400> 205

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ctggaaagga ctctcttctg ggttgtcttc acttctctacc tcttaacctt agtgggcaac      120
acactcatca tctgtctgtc tgcgtggac cccaagctcc actctccaat gtactttttc      180
ctctccaacc tctcttctt ggacctctgt ttcaccaaga gttgtgttcc ccaaagtctg      240
gtcaacctct ggggccccaa gaagaccatc atgctctctg actgctctgt ccagatcttc      300
atcttctctg ccttggggac aactgagtgc atctctctga cagtgatggc ttttgatcgc      360
tacgtggctg tctgccagcc cctccactat gccaccatca tccacccccg cctgtgctgg      420

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cagctggcat	ctgtggcctg	ggtcattggg	ctagtggagt	cagtgggtcca	gacaccatcc	480
accctgcacc	tgcccttctg	ccccgatcgg	caggtggatg	atcttgtctg	tgaggtecca	540
gctctaattc	gactctcctg	tgaagacacc	tcctacaatg	agatccaggt	ggctgttgcc	600
agtgcttcca	tcttggttgt	gcctctcagc	ctcatccttg	tctcttacgg	agccattacc	660
tgggcagtg	tgaggattaa	ctctgcaaaa	gggaggagga	aagcttttgg	gacctgtccc	720
tcccatctca	ctgtgggtcac	cctcttctac	agctcagtea	ttgctgtcta	cctccagccc	780
aaaaatccct	atgcccaga	gaggggcaag	ttctttgggtc	tcttctatgc	agtgggcact	840
ccttcactta	accctctcat	atacaccctg	aggaacaagg	aggtaaccag	ggcattcagg	900
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<210> 206

<211> 1030

<212> DNA

<213> Unknown (H38g54 nucleotide)

<220>

<223> Synthetic construct

<400> 206

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ctggaaagga	ctctctttgt	agttgtcttc	acttcctacc	tcctaacc	gggtgactca	120
tcactcctgt	gtctgtgctg	gaccccaggc	tcactctcc	aatgtacttt	ttcctctcca	180
acctctcctt	cttggaacctc	tgtttcacca	taagttgtgt	ccccgggatg	ctgggtcaacc	240
tctgggagcc	aaagaagacc	atcatcttac	tgggctgtc	tgccagttc	ttcatcttcc	300
tgccctggg	gaccactgag	tgcatcctcc	tgacgggtgat	ggcctttgac	cgctacatgg	360
ctatcttcaa	gcccctgcgc	catgccacca	tcgtccacct	ctgcctgtgc	tggcagctgg	420
catctgtggc	ctgggtcatt	gggctggtag	agtcagtggt	ccagacacca	tcacccctgc	480
gcctgccttt	ctgcccccat	cagcaggtgg	atgattttgt	ctgtgaggtc	ccagctctaa	540
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tggtgtcacc	ctcttctaca	gctcagtcac	tgctgtctac	ctccagccca	aaaatcccta	780
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gaaggaaatg	gggctcatat	aaagttgagg	gagagctgtt	taatgtgctt	tctaaattaa	960
gaagaaatta	tttatccttt	tgtgaacaag	tttgagctcc	caagtatact	acctttcata	1020
cacccatcac						1030

<210> 207

<211> 873

<212> DNA

<213> Unknown (H38g55 nucleotide)

<220>

<223> Synthetic construct

<400> 207

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gtgctgctgg	cggtgcgcga	cccgcgcctg	cacacgcca	tgtactactt	cctctgccac	120
ctggccttgg	tagacgcggg	cttcaactact	agcgtgggtg	cgccgctgct	ggccaacctg	180
cgcggaaccag	cgctctggct	gccgcgcagc	cactgcacgg	cccagctgtg	cgcatcgctg	240
gctctgggtt	cggccgaatg	cgctcctcctg	gcggtgatgg	ctctggaccg	cgcggccaag	300
aaagtgaagg	gggcagcgag	gaggctgctg	cggagtctgg	ggagaggcca	ggctgggcag	360
agcgctcct	ggctaagcgg	cctcaccaac	tcggttcgcg	aaaccgcgct	cctggctgag	420
cggccgctgt	gcgcgccccg	cctgctggac	cacttcatct	gtgagctgcc	ggcggtgtctc	480
aagctggcct	gcggaggcga	cggagacact	accgagaacc	agatgttcgc	cgcgcgcgtg	540
gtcatcctgc	tgctgccgtt	tgccgtcatc	ctggcctcct	acgggtgccgt	ggcccagact	600
gtctgttgca	tgcggttcag	cggaggccgg	aggaggccgg	tgggcacgtg	tgggtcccac	660
ctgacagccg	tctgcctgtt	ctacggctcg	gccatctaca	cctacctgca	gcccgcgcag	720
cgctacaacc	aggcacgggg	caagttcgta	tcgctcttct	acaccgtggg	cacacctgct	780
ctcaaccgcg	tcactctacac	cctcaggaat	aagaaagtga	agggggcagc	gaggaggctg	840

ctgcggagtc tggggagagg ccaggctggg cag

873

<210> 208

<211> 921

<212> DNA

<213> Unknown (H38g56 nucleotide)

<220>

<223> Synthetic construct

<400> 208

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ttctcactca	taactacaat	atatgcactg	actataacag	gtaatggagc	cattgcttttt	120
gccctgtggg	gtgaccggcg	acttcacact	cccatgtaca	tgttcctggg	agatttctcc	180
tttttagaga	tatggtatgt	cttttctaca	gttcccaaga	tgttgggtcaa	cttccttttca	240
gagaaaacaa	acatctcctt	tgctggattg	ctttctccag	atctattttct	tcttctctttt	300
gatacatcag	aatgcttgct	tttgactgtg	atggcctttg	atcagaacct	tgctatctgc	360
cggcccttgc	actatcctaa	tatcatgact	gggcatctct	gtgccaaact	ggccatactg	420
tgctgggttt	gtggctttct	gtgggtcctg	atccccattt	tctcatctct	cagatgcctt	480
tctgtggccc	aaacattatt	gaccatgttg	tgtgtgaccc	agggccacta	tttgcatgtg	540
attgtgtttc	tgccccaaga	atccaactgt	tttgctacac	tctaagctca	ttagttattt	600
ttggtaactt	cctctttatt	attggatcct	atactattgt	cctgaaagtt	gtgttgggta	660
cgccttcaag	cactgggaga	cataaggcct	tctctacctg	tgggtctcat	ttggctgtgg	720
tatcactgtg	ctatggctct	cttatgggtca	tgtatgtgag	cccaggactc	ggacattcta	780
cggagatgca	gaaaattgta	actttgttct	atgctatggg	gacctcactc	ttcaatcccc	840
ttatctatag	gcctccagaa	taaggagata	aaggcagcct	tgaggaaagt	tctgggtgagt	900
tccaacataa	tctaaggcat	a				921

<210> 209

<211> 660

<212> DNA

<213> Unknown (H38g57 nucleotide)

<220>

<223> Synthetic construct

<400> 209

gcatgtaagc	atgcatgata	ctgactgtga	tggcctatga	ctgcttagta	gccatctgtc	60
gccctctgca	ttacccagtc	atcgtgaatc	ctcacctctg	tgtcttcttc	gttttgggtgt	120
ccttctcatt	agcatgtagg	ttcccagctg	cacagttgaa	ttgtgttaca	attcaccatc	180
atcaagaatg	tggaaatctc	taattttgtc	tgtgacccct	ctcaatttct	caaacttgcc	240
tgttctgaca	gcgtcatcaa	tagcatattc	acgtatttcc	atagtactat	gtttgggtttt	300
cttcccattt	cagggatcct	tttgtcttac	tttaaaatcg	tcaccttcat	tctctggatt	360
tcactctcag	atgggaagta	taaagccttc	tccacctgtg	actctcacct	agcagttggt	420
tgctgatttt	atggaacagg	cattggcggtg	tacttgactt	cagctctgtc	accaccccc	480
aggaatgggtg	tgatggcggtc	agtgatgtac	gctgtgggtca	cccccatgct	gaaccttttc	540
atctacagcc	tgagaaacag	ggacatacaa	agtgcctgtg	ggaggctgct	cagcagaaca	600
gtcgaatctc	atgatctggt	ccatcctttt	tcttgtgtgg	gtaagggcaa	ccacattaaa	660

<210> 210

<211> 942

<212> DNA

<213> Unknown (H38g58 nucleotide)

<220>

<223> Synthetic construct

<400> 210

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cccaaattgg	agattccctt	ctttctgggtg	tttctgagtt	tctacctagt	cacccttctt	120
gggaatgtgg	ggatgattat	gttaatccaa	gtagatgtca	aactctacac	cccaatgtac	180

ttcttctctga	gccacctctc	cctgctggat	gcctgttaca	cctcagtcac	cacccctcag	240
atcttagcca	cattggccac	aggcaaaacg	gtcatctcct	acggccactg	tgctgcccag	300
ttctttttat	tcaccatctg	tgagggcaca	gagtgccttc	tgctggcagt	gatggcctat	360
gatcgctatg	ctgccattcg	caaccactg	ctctataccg	tgcccatgaa	tcccaggctc	420
tgctggagcc	tggtggtagg	agcctatgtc	tggtgggtgt	caggagccat	cctgcgtacc	480
acttgcacct	tcacctctc	cttctgtaag	gacaatcaaa	taaacttctt	cttctgtgac	540
ctcccacccc	tgctgaagct	tgctgcagt	gacacagcaa	acatcgagat	tgcatcatc	600
ttctttggca	atthttgtgat	tttgcccaat	gcctccgtca	tcctgatttc	ctatctgctc	660
atcatcaaga	ccattttgaa	agtgaagtct	tcaggtggca	gggccaagac	tttctccaca	720
tgtgcctctc	acatcactgc	tgtggccctt	ttctttggag	cccttatctt	catgtatctg	780
caaagtggct	caggcaaatc	tctggaggaa	gacaaagtgc	tgtctgtctt	ctatacagtg	840
gtcatcccca	tgctgaaccc	tctgatctac	agcttaagaa	acaaagatgt	aaaagacgcc	900
ttcagaaagg	tcgctaggag	actccagggt	tccttgagca	tg		942

<210> 211

<211> 941

<212> DNA

<213> Unknown (H38g59 nucleotide)

<220>

<223> Synthetic construct

<400> 211

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gcccacacc	ctgaaatcca	gactgccttc	ttcttggaac	tactgttttt	ctactagtca	120
cagcgtttga	gaacatcctt	atcggttgctg	tagtgagatg	agattctcga	cttcatactc	180
ctatgggatt	tttttttctt	cagtacctta	tcctcccttg	aaatgtgtta	ctccatcagc	240
tgggagctat	aagtcttgge	tcaatgcac	aaggacttcc	ccaccatctc	ctataacagc	300
tgttctgttc	agatgatcac	acacctcttt	ctggggatga	cagtgtctcc	tccttgctgg	360
catggcttac	aacaggtttg	ttgaaatctc	ttatctcctc	cattacacta	ttattatgag	420
caatcggggc	tgtatacagt	tggccttggg	aatctggacc	catgccttct	tagtagcagt	480
cacactaatc	attgcaattc	ctgctagtta	ttatggacac	aatgtcatca	accattttac	540
cttgagatcc	aggccctgct	gaagctcgct	tgctcagaca	cccttgtcag	cctgattcag	600
ggctctgggta	tcagtgtggt	cacactgccc	ctgcccttca	cattcatcct	catctcctaa	660
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atctgactgg	agtcaccata	ttttatgggg	cagccatctg	catgtacttg	aaacctcagt	780
caaaggggaa	ccaggaagag	gataaagttg	tctcaaaact	ttatggagca	gttactccca	840
tgttaaatcc	cccaattttac	attcagagaa	ataaggatat	aaaaggtgca	cttagaaagt	900
tagccaaagg	aaatgaaaaa	tcctaacagt	tctctttaa	c		941

<210> 212

<211> 1049

<212> DNA

<213> Unknown (H38g61 nucleotide)

<220>

<223> Synthetic construct

<400> 212

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tacaaccatc	caaaattttca	gattgccttt	tatcgacca	tggtagtggg	ctacctgatc	120
acatttggtg	gtagcagtct	cattattggt	gtggttaaag	ttgatgggtg	gcttcacact	180
cctatgtggt	ttttcctaag	caacctgtcc	ttccttgata	tctgtactc	cagcaattca	240
gtaccttttt	tgtttttcaa	tggtttaaga	gactacccca	ccatttccta	taacagctgt	300
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atggcttatg	agagatttgt	tgtgatctcc	aatccccctgc	gctacatcat	cattatgaac	420
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atacaataat	tgcaataata	cattgcaata	atacattaat	tgcaatgatt	gcattgcaat	540
tcctgccccat	ttttgtggac	acaatgtcat	caaccatttt	acctgtgagg	tgcaggaatt	600
gttgaagctt	gtctgctcag	acatcccagg	cagcctcatc	ctcgggtctag	tcacgggcat	660
attcaccttg	tccttgccct	tcaccttgcc	cctgcccctc	accttcaccc	tcttcgccta	720

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gtacttgaaa	cctcagtcac	gggaatccca	agatgagggt	aaagtcacat	ctgtattttt	900
tttgaaagta	gagaagcaac	atcaaaatga	tagcatctct	gtattttatg	gtgttggtgac	960
ccctatgttg	aacccctca	tttacacctt	gagagacaag	gatgcaaaaa	tgctctaaga	1020
aaaataatta	ggaagaaaga	gtcctaaaa				1049

<210> 213

<211> 954

<212> DNA

<213> Unknown (H38g62 nucleotide)

<220>

<223> Synthetic construct

<400> 213

atggacaaga	taaaccagac	atgtgtgaga	gaattcattc	ttctgggact	ctctgggttac	60
cccaaacttg	agatcatttt	ctttgctctg	attctagtta	tgtacgtagt	gattctaatt	120
ggcaatgggtg	ttctgatcat	agcaagcatc	ttggattctc	gtcttcacat	gcccattgtac	180
ttcttctctg	gcaacctctc	tttctgggat	atctgctata	caacctctc	cattccctca	240
acactgggtga	gcttaatctc	aaagaaaaga	aacatttctc	tctctgggat	tgcagtgcag	300
atgttctttg	ggtttgcaat	ggggtcaaca	gaatgtttcc	tccttggcat	gatggcattt	360
gatcggttatg	tggccatctg	taacctctg	agatacccca	tcacatgaa	caagggtggtg	420
tatgtactgc	tgacttctgt	atcatggctt	tctgggtgaa	tcaattcaac	tgtgcaaaca	480
tcacttgcca	tgcgatggcc	tttctgtggg	aacaatatta	ttaatcattt	cttatgagag	540
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atcctctaca	ccatcttgcg	aacgaactcg	gccacaggaa	gacacaaggc	attttctaca	720
tgctcagctc	acctgactgt	ggtgatcata	ttttatggta	ccatcttctt	tatgtatgca	780
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tccatgtttt	atgggggtgt	gaccccatg	ttaaacccca	taatctatag	cttgagaaat	900
aaagatgtaa	aagctgctat	aaaaatattg	ctgagcagga	aagctattaa	ccag	954

<210> 214

<211> 957

<212> DNA

<213> Unknown (H38g63 nucleotide)

<220>

<223> Synthetic construct

<400> 214

atgttccccg	caaattggac	atctgtaaaa	gtatttttct	tcctgggatt	ttttcactac	60
cccaaagtcc	aggtcatcat	atgtgcgggtg	tgcttgctga	tgtacctgat	caccttgctg	120
ggcaacattt	ttctgatctc	catcaccatt	ctagattccc	acctgcacac	ccctatgtac	180
ctcttctctc	gcaatctctc	ctttctggac	atctgggtact	cctcttctgc	cctctctcca	240
atgctggcaa	actttgtttc	agggagaaac	actatttcat	tctcagggtg	cgccactcag	300
atgtacctct	cccttgccat	gggctccact	gagtgtgtgc	tcctgccccat	gatggcatat	360
gaccgggtatg	tggccatctg	caacccccctg	agataccctg	tcacatgaa	taggagaacc	420
tgtgtgcaga	ttgcagctgg	ctcctgggat	acaggctgtc	tcaactgccat	ggtggaaatg	480
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tgcacagccc	acctgatggt	ggtagttttg	ttctatggga	cggctctctc	catgcacctg	780
aagccctccg	ctgtagattc	acaggaaata	gacaaattta	tggttttggg	gtatgccgga	840
caaaccceca	tggtgaatcc	tatcatctat	agctctacga	acaaagaggt	gaaagtggcc	900
ttgaaaaaat	tgctgattag	aaatcatttt	aatactgcct	tcatttccat	cctcaaa	957

<210> 215

<211> 930

<212> DNA

<213> Unknown (H38g64 nucleotide)

<220>

<223> Synthetic construct

<400> 215

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cctgaatggg	cactccctct	cttccctctt	tttttattta	tgtatctcat	caccgtattg	120
gggaacttag	agatgattat	tctgacctc	atggatcacc	agctccacgc	tccaatgtat	180
ttccttctga	gtcacctcgc	tttcatggac	gtctgctact	catctatcac	tgccccccag	240
atgctggcag	tgctgctgga	gcatggggca	gctttatctt	acacacgctg	tgctgctcag	300
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gaccgctact	tggtgtgtg	ccagccccctg	ctttatgtca	ccatcctgac	acagcaggcc	420
cgcttgagtc	ttgtggctgg	ggcttacggt	gctgggtctca	tcagtgcctt	ggcgcggaca	480
gtctcagcct	tcactctctc	cttctgtgga	accagtgaga	ttgactttat	tttctgtgac	540
ctccctcctc	tgtaaagtt	gacctgtggg	gagagctaca	ctcaagaagt	gctgattatt	600
atgtttgcc	tttttgcatt	ccctgcttcc	atggtgggtga	tcttgggtgtc	ctacctgttt	660
atcatcgtgg	ccatcatggg	gatccctgct	ggaagccagg	ccaagacctt	ctccacctgc	720
acctccaccc	tcactgctgt	gtcactcttc	tttgggtacc	tcactctcat	gtacttgaga	780
ggtaactcag	atcagtcctc	ggagaagaat	cgggtagtgt	ctgtgcttta	cacagaggtc	840
atccccatgt	tgaatccctt	catctacagc	ctgaggaaca	aggaagtga	ggaggccctg	900
agaaaaattc	tcaatagagc	caagttgtcc				930

<210> 216

<211> 964

<212> DNA

<213> Unknown (H38g65 nucleotide)

<220>

<223> Synthetic construct

<400> 216

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catcctgcct	tccccgggct	tctctttgca	atagtcttct	ccatctttgt	ggcggctata	120
acagccaact	tggtcatgat	tctgctcacc	cacatggact	cccgcctcca	cacacccatg	180
tacttcttgc	tcagccagct	ctccatcatg	gataccatct	acatctgtat	caactgtccc	240
aagatgctcc	aggacctcct	gtccaaggac	aagaccattt	ccttccctggg	ctgtgcagtt	300
cagatcttcc	tctacctgac	cctgattgga	ggggaattct	tctgtctggg	tctcatggcc	360
tatgaccgct	atgtggctgt	gtgcaacctc	ctacgggtacc	ctctcctcat	gaaccgcagg	420
gtttgcttat	tcatgggtgg	cggtccctgg	gttgggtggt	ccttggatgg	gttcatgctg	480
actcctgtca	ctatgagttt	ccccttctgt	agatcccgag	agatcaatca	ctttttctgt	540
gagatcccag	ccgtgctgaa	gttgtcttgc	acagacacgt	cactctatga	gacctgatg	600
tatgcctgct	gcgtgctgat	cgctgcttat	ccctctatct	gtcatctctg	tctcctacac	660
gcacatcctc	ctgactgtcc	acaggatgaa	ctctgctgag	ggccggcgca	aagcctttgc	720
tacgtgttcc	tcccacatta	tggcgggtgag	cgttttctac	ggggcagcct	tctacaccaa	780
cgtgctgccc	cactcctacc	acactccaga	gaaagataaa	gtgggtgtctg	ccttctacac	840
catcctcacc	cccattgctca	acccactcat	ctacagcttg	aggaataaag	atgtggctgc	900
agctctgagg	aaagtactag	ggagatgtgg	ttcctcccag	agcatcaggg	tggcgactgt	960
gatac						964

<210> 217

<211> 933

<212> DNA

<213> Unknown (H38g66 nucleotide)

<220>

<223> Synthetic construct

<400> 217

atggctcaca	caaatgaatc	gatgggtgtct	gagtttgtac	ttttgggact	ctctaattcc	60
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tggggacttc	aacttttctt	tttcgccatc	ttctctatag	tctatgtgac	atcagtgcta	120
ggcaatgtct	taattattgt	cattatttct	tttgactccc	atttgaactc	tcctatgtac	180
ttcttgctca	gtaatctttc	tttcattgat	atctgtcagt	ctaactttgc	cacccccaag	240
atgcttgtag	acttttttat	tgagcgcaag	actatctcct	ttgagggttg	catggcccag	300
atattcgttc	ttcacagttt	tgttgggagt	gagatgatgt	tgcttgtagc	tatggcataat	360
gacagattta	tagccatatg	taagcctctg	cactacagta	caattatgaa	cgggaggctc	420
tgtgtaattt	ttgtgtctat	ttcctgggcg	gtgggcgttc	ttcattctgt	gagccacttg	480
gcttttacag	tggacctgcc	attctgtggt	cccaatgagg	tggatagctt	cttttgtgac	540
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acgaacagtg	gcctgatata	attgagctgt	ttcctggcct	taattatttc	ctacaccatc	660
attttgatcg	gtgtccgatg	caggctctcc	agtgggtcat	ctaaggctct	ttctacatta	720
actgcccaca	tcacagtggg	cattcttttc	ttcgggcctt	gcatttattt	ctatatatgg	780
ccttttagca	gacttctctg	ggacaaattt	ctttctgtgt	tctacactgt	ttgtactccc	840
ttgttgaacc	ccatcatcta	ctctctgagg	aatgaagatg	ttaaagcagc	catgtggaag	900
ctgagaaacc	gtcatgtgaa	ctcctggaaa	aac			933

<210> 218

<211> 936

<212> DNA

<213> Unknown (H38g67 nucleotide)

<220>

<223> Synthetic construct

<400> 218

atggatcaga	aaaatggaag	ttctttcact	ggatttatcc	tactgggttt	ctctgacagg	60
cctcagctgg	agctagtcct	ctttgtgggt	cttttgatct	tctatatctt	cactttgctg	120
gggaacaaaa	ccatcattgt	attatctcac	ttggaccac	atcttcacac	tcctatgtat	180
tttttcttct	ccaacctaa	ctttttggat	ctgtgttaca	caaccggcat	tgttccacag	240
ctcctgggta	atctcagggg	agcagacaaa	tcaatctcct	atgggtgggtg	tgtagttcag	300
ctgtacatct	ctctaggctt	gggatctaca	gaatgcgttc	tcttaggagt	gatggatttt	360
gaccgctatg	cagctgtttg	caggcccttc	cactacacag	tagtcatgca	cccttgtctg	420
tatgtgctga	tggcttctac	ttcatgggtc	attgggtttg	ccaactccct	attgcagacg	480
gtgctcatct	tgcttttaac	actttgtgga	agaaataaat	tagaacactt	tctttgtgag	540
gttcctccat	tgctcaagct	tgctgtgtgt	gacactacta	tgaatgaatc	tgaactcttc	600
tttgtcagtg	tcattattct	tcttgtacct	gttgcattaa	tcattattctc	ctatagtcag	660
attgtcaggg	cagtcatgag	gataaagtta	gcaacagggc	agagaaaagt	gtttgggaca	720
tgtggctccc	acctcacagt	ggtttccctg	ttctacggca	cagctatcta	tgcttacctc	780
cagcccgcca	acaactactc	tcaggatcag	ggcaagtcca	tctctctctt	ctacaccatc	840
attacacca	tgatcaacct	cctcatatat	acactgagga	acaaggatgt	gaaaggagca	900
cttaagaagg	tgctctggaa	gaactacgac	tccaga			936

<210> 219

<211> 939

<212> DNA

<213> Unknown (H38g68 nucleotide)

<220>

<223> Synthetic construct

<400> 219

atgtgctcag	ggaatcagac	ttctcagaat	caaacagcaa	gcactgattt	caccctcacg	60
ggactctttg	ctgagagcaa	gcatgctgcc	ctcctctaca	ccgtgacctt	ccttcttttc	120
ttgatggccc	tactgggaa	tgccctctc	atctctctca	tccactcaga	gccccgctc	180
cacaccccca	tgtacttctt	catcagccag	ctcgcgctca	tggatctcat	gtacctatgc	240
gtgactgtgc	ccaagatgct	tgtggggccag	gtcactggag	atgataccat	ttccccgtca	300
ggctgtggga	tccagatggt	cttccacctg	accctggctg	gagctgaggt	tttctctctg	360
gctgccatgg	cctatgaccg	atatgctgct	gtttgcagac	ctctccatta	cccactgctg	420
atgaaccaga	gggtgtgcca	gtcctgggtg	tcagcctgct	gggttttggg	aatggttgat	480
ggtttgttgc	tcaccccat	taccatgagc	ttcccccttt	gccagtctag	gaaaatcctg	540
agttttttct	gtgagactcc	tgccctgctg	aagctctcct	gctctgacgt	ctccctctat	600

aagatgctca	cgtacctgtg	ctgcatectc	atgcttctca	cccccatcat	ggatcatctcc	660
agctcatata	ccctcatcct	gcattctcatc	cacaggatga	attctgcccgc	cggccgcagg	720
aaggcccttg	ccacctgctc	ctcccatatg	atcatagtgc	tgctgctctt	cgggtgcttcc	780
ttctacacct	acatgctccc	gagttcctac	cacacagctg	agcaggacat	gatgggtgtct	840
gccttttaca	ccatcttcac	tcctgtgctg	aacccctca	tttacagtct	ccgcaacaaa	900
gatgtcacca	gggctatgag	gagcatgatg	cagtcaaga			939

<210> 220

<211> 942

<212> DNA

<213> Unknown (H38g69 nucleotide)

<220>

<223> Synthetic construct

<400> 220

atggatgtgg	gcaataagtc	taccatgtct	gaatttgttt	tgctggggct	ctctaattcc	60
tgggaactac	agatgttttt	ctttatgggtg	ttttcattgc	tttatgtggc	aacaatgggtg	120
ggtaacagcc	tcatagtcac	cacagttata	gtggaccctc	acctacactc	tcctatgtat	180
ttcctgctta	ccaatctttc	aatcattgat	atgtctcttg	cttcttttcgc	caccccaaaag	240
atgattacag	attacctaac	aggtcacaaa	accatctctt	ttgatggctg	ccttaccag	300
atattctttc	tccacctttt	cactggaact	gagatcatct	tactcatggc	catgtccttt	360
gataggtata	ttgcaatatg	caagcccctg	cactatgctt	ctgtcattag	tccccagggtg	420
tgtgttgctc	tcgtgggtggc	ttcctggatt	atgggagtta	tgcattcaat	gagtcagggtc	480
atatttgccc	tcacgttacc	attctgtggg	ccctatgagg	tagacagctt	tttctgtgac	540
cttctgtggg	tggtccagtt	ggcttgtgtg	gatacttatg	ttctgggcct	ctttatgtac	600
tcaacaagtg	gcataattgc	gttgtcctgt	tttattgttt	tattttaattc	atatgttatt	660
gtcctgggta	ctgtgaagca	tcattcttcc	agaggatcat	ctaaggccct	ttctacttgt	720
acagctcatt	tcattgttgt	cttcttggtc	tttgggccat	gcattcttcat	ctacatgtgg	780
ccactaagca	gctttctcac	agacaagatt	ctgtctgtgt	tttataccat	ctttactccc	840
actctgaacc	caataatcta	tactttgagg	aatcaagaag	taaagatagc	catgaggaaa	900
ctgaaaaata	ggtttctaaa	ttttaataag	gcaatgcctt	ca		942

<210> 221

<211> 930

<212> DNA

<213> Unknown (H38g70 nucleotide)

<220>

<223> Synthetic construct

<400> 221

atgggagaca	atataacatc	catcagagag	ttcctcctac	tgggatttcc	cgttggccca	60
aggattcaga	tgctcctctt	tgggctcttc	tccctgttct	acgtcttcac	cctgctgggg	120
aacgggacca	tactggggct	catctcactg	gactccagac	tgcacgcccc	catgtacttc	180
ttcctctcac	acctggcggt	cgctgacatc	gcctacgcct	gcaacacggt	gccccggatg	240
ctgggtgaacc	tcctgcatcc	agccaagccc	atctcctttg	cggggccgcat	gatgcagacc	300
tttctgtttt	ccacttttgc	tgtcacagaa	tgtctcctcc	tggtgggtgat	gtcctatgat	360
ctgtacgtgg	ccatctgcca	ccccctccga	tatttggcca	tcattgacctg	gagagtctgc	420
atcacccctg	cgggtgacttc	ctggaccact	ggagtccttt	tatccttgat	tcattctgtg	480
ttacttctac	ctttaccctt	ctgtaggccc	cagaaaattt	atcacttttt	ttgtgaaatc	540
ttggctgttc	tcaaacttgc	ctgtgcagat	acccacatca	atgagaacat	ggtcttggcc	600
ggagcaattt	ctgggctggg	gggacccttg	tccacaattg	tagtttcata	tatgtgcac	660
ctctgtgcta	tccttcagat	ccaatcaagg	gaagttcaga	ggaaagcctt	cgcacctgc	720
ttctcccacc	tctgtgtgat	tggactcggt	tatggcacag	ccattatcat	gtatgttggg	780
cccagatatg	ggaaccccaa	ggagcagaag	aaatatctcc	tgctgtttca	cagcctcttt	840
aatcccatgc	tcaatcccct	tatctgtagt	cttaggaact	cagaagtga	gaatactttg	900
aagagagtgc	tgggagtaga	aagggtctta				930

<210> 222

<211> 969

<212> DNA

<213> Unknown (H38g71 nucleotide)

<220>

<223> Synthetic construct

<400> 222

cacacggagc	cacggaatct	cacagggtgc	tgagaattcc	tctcctggg	actctcagag	60
gatccagaac	tgctgccgg	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggc	120
atgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgactcccc	tccacacccc	180
cgtgtacttc	tccctctcca	acctgtgctg	ggctgacatc	ggtttcacct	cgcccacggg	240
tcccaagatg	attgtggaca	tgcagtcgca	tagcagagtc	atctctcatg	cgggctgcct	300
ggcacagatg	tctttcttgg	tcttttttgc	atgtatagaa	gacatgctcc	tgactgtgat	360
ggcctatgac	agctttgtag	ccatctgtca	ccctctgcac	taccagtc	tcatgaatcc	420
tcacctctgt	gtcttcttcg	ttttgggtgc	ctttttcctt	agcctgttgg	attcccagct	480
gcacgggttg	attgtgttac	aattcaccat	catcaagaat	gtggaaatct	ctaattttct	540
ctgtgacccc	tctcaacttc	tcaaacttgc	ctgttctgac	agcgtcacca	atagcatatt	600
catatatttt	gatagtacta	tgtttggttt	tcttcccat	tcagggatcc	ttttgtctta	660
gtataaaatt	gtcccctcca	ttctaaggat	gtcatcgta	gatgggaagt	ataaagcctt	720
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cgctgtggtc	acccccatgc	tgaacctttt	catctacagc	ctgagaaaca	gggacataca	900
aagtgccctg	cggaggctgc	gcagcagaac	agtggaaatct	catgatctgt	tccatccttt	960
ttcttgtgt						969

<210> 223

<211> 945

<212> DNA

<213> Unknown (H38g72 nucleotide)

<220>

<223> Synthetic construct

<400> 223

atggcctgga	gcaatcagtc	tgcggttaacc	gaattcatac	tacgggggtct	gtccagttct	60
ttagaactcc	agattttct	cttccgtttt	ttctccatag	tctatgcagc	cactgtgctg	120
gggaaccttc	ttattgtggt	caccattgca	tcagagccac	accttcattc	ccctacgtac	180
tttctgctgg	gcaatctctc	cttcattgac	atgtccctgg	cctcatttgc	cacccccaaa	240
atgattgcag	acttccttag	agaacacaaa	gccatctctt	ttgaaggctg	catgaccag	300
atgttcttcc	tacatctctt	aggggggtgct	gagattgtac	tgctgatctc	catgtccttt	360
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tgtgttgggc	ttgtgatact	ttcctggatt	gtcggcatct	tccatgctct	gagtcagtta	480
gcatttacag	tgaatctgcc	cttctgtgga	cccaatgaag	tagacagttt	cttttgtgac	540
ctcccttttg	tgattaaact	tgcttgtgtc	gacacatata	ttctgggggt	gttcattgatc	600
tcaaccagtg	gcattgattg	cctgggtgtg	ttcactctct	tggtgatctc	ttacactatc	660
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cctttcacaa	atttcccaat	agacaaagta	ctctcagtat	tttataccat	atacactccc	840
ctcttgaatc	cagtgatcta	taccgttagg	aataaagatg	tcaagtattc	catgaggaaa	900
ctaagcagcc	atatcttta	atctaggaag	actgatcata	ctcct		945

<210> 224

<211> 963

<212> DNA

<213> Unknown (H38g73 nucleotide)

<220>

<223> Synthetic construct

<400> 224

atgaaaaagt	acatggaaag	gactaattga	acaactgagt	ttgagttgat	tctcataagt	60
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ctatgagtag	tcataagttg	acaaaaactc	ctttttgtca	catgcttagt	ggtgtatcta	120
gtgacctct	tggggaacag	aatacagatc	atcccaacac	tccttggttc	ccacctatat	180
ttatgccatg	gcaatccctc	cttcctggat	atcgggctta	cgtccttttt	actccctcta	240
tcctaataaa	cttcctatca	gagggaaaaa	aactctcttt	cacagattgt	attatacaaa	300
tgtctatctt	ctattccatg	gggtccacgg	agtgtgtgct	cctagcagtg	atggcatatg	360
ataactgtgt	ggatcatcagc	aaattcctga	gataccctct	catcataaat	aaggtgaata	420
aaataaaaaa	ggtgctttgt	gttttcattg	ctactgtctc	ttatgaatta	ggatttctca	480
acagacaaaa	tgtattaata	gttacatatg	aatgcacttt	tgtggaaaaa	acatcattaa	540
tcatttttat	aaaatattac	agttaaatggc	tctggcttgc	atagatattt	ccttgaatga	600
gaatataata	atattgggca	aagtaaactt	ttcatttact	ttattactac	catttcagtt	660
ctttatatct	agttttttat	attttcacca	tctatgctgt	attgaaatca	attcagctga	720
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ccggacaatc	ctcttcatgt	acataaagtc	aacatcctat	ggcactactt	cagagaaact	840
gggtgacctg	ttctgcgggg	tagtaatgct	catgctcaat	cttatcatct	atagcctggg	900
gaatatggag	gtgcttgggg	ttatgaagaa	attgatcagt	atgagtagac	cctggtgctg	960
gaa						963

<210> 225

<211> 974

<212> DNA

<213> Unknown (H38g74 nucleotide)

<220>

<223> Synthetic construct

<400> 225

cacacggagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctgtccctgt	ccctgtccat	gtccatgtat	120
ctgggtcacg	tgtctgaggaa	cctgtctcagc	atcctggctg	tcagctctga	ctcccaactc	180
cacacccccca	tgtactttctt	cctctccaac	ctgtgctggg	ctgacatcgg	tttcacctcg	240
cccattggttc	ccaagatgat	catggacatg	cagtcgcata	gcagagtcac	ctctcatgcg	300
ggctgcctga	cacggatgtc	tttcttggtc	ctttttgcat	gtatagaaga	catgctcctg	360
actgtgatgg	cctatgactg	ctttgtagcc	atctgtcgcc	ctctgcacta	cccagtcac	420
atgaatcctc	acctctgtgt	cttcttcggt	ttgggtgctc	ttttccttag	cctgttggat	480
tcccagctgc	acagtttagat	tgtgttacaa	ttcactttct	tcaataatgt	ggaaattgct	540
aattttgtct	atgagccatc	tcaacttctc	aaccttgact	gttctgacac	cgatcatcaat	600
agcgtattta	tatatttcga	tagtactgtt	tggttttctt	cccatttcag	ggatccctttg	660
tcttagtata	aaattgtccc	ctccattcta	aggatgtcat	cgtcagatgg	gaagtataaa	720
gccttcgcca	cctgtggctc	tcacctagca	ggtgtttgct	gatttgatgg	aacaggcatt	780
ggcatgtacc	tgacttcagc	tgtgtcacca	ccccccagga	atgggtgtgg	ggcgtcagtg	840
atgtacgctg	tggtcacccc	catgctgaac	cttttcatct	acagcctgag	aaacagggac	900
attcaaagtg	ccctgcagag	gctgagtagc	agaacagtgg	aatctcatga	tctgttccat	960
cctttttctt	gtgt					974

<210> 226

<211> 957

<212> DNA

<213> Unknown (H38g75 nucleotide)

<220>

<223> Synthetic construct

<400> 226

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gaggtggagc	tgtgtctcct	ggtgtcctctg	ctgcccacgt	tcctgtctgac	tcttctgggg	120
aacctgtctc	tcattctccac	tgtgtctgtcc	tgtctccgcc	tccacacccc	catgtacttc	180
ttcttgtgca	acctctctat	cctggacatc	ctcttcacct	cagtcactctc	tccaaaagtg	240
ttggccaact	taggatctag	ggataaaaacc	atctcctttg	ccggatgtat	cacccagtg	300
tattttctact	ttttcttggg	cacagtttag	ttcctcctgc	tgacgggtcat	gtcctatgac	360
cgttatgcca	ccatctgctg	ccccctgcgg	tacaccacca	tcatgagacc	ttctgtctgc	420
attgggaccg	ttgtattctc	ttgggtggga	ggcttcctgt	ctgtgctctt	tccaaccatc	480

ctcatctccc	agctgccctt	ctgtggctcc	aatatcatta	accacttctt	ctgtgacagt	540
ggacccttgc	tggccctggc	ctgtgcagac	accactgcc	tcgagctgat	ggattttatg	600
ctttcttcca	tggtcatect	ctgtgcata	gtcctcgtgg	cctattccta	tacgtacatc	660
atcttgacca	tagtgcgcat	tccttctgca	agtgggaagga	agaaggcctt	taataacctgt	720
gcttcccacc	tgaccatagt	catcattcct	agtggcatca	ctgtgtttat	ctatgtgact	780
ccctcccaga	aagaatatct	ggagatcaac	aagatccctt	tggttctgag	cagtgtggtg	840
actccattcc	tcaaccctt	tatatatact	ctgaggaatg	acacagtgc	gggagtcctc	900
agggatgtgt	gggtcaggg	tcgaggagtt	tttgaaaaga	ggatgagggc	agtgtctg	957

<210> 227

<211> 939

<212> DNA

<213> Unknown (H38g76 nucleotide)

<220>

<223> Synthetic construct

<400> 227

atggaaactg	caaattacac	caagggtgaca	gaatttggtc	tcactggcct	atcccagact	60
cgggaggtcc	aactagtcct	atgtgttata	tttctatcct	tctatttggt	catcctacca	120
ggaaatatcc	ttatcatttg	caccatcagg	ctagaccctc	atctgacttc	tcctatgtat	180
ttcctgttgg	ctaactctggc	cctccttgat	atgttggtact	cttccattac	agcccctaaa	240
atgctcatag	acttctttgt	ggagaggaag	ataatttcct	ttggtggatg	cattgcacag	300
ctcttcttct	tacactttgt	tggggcttcg	gagatgttct	tgctcatagt	gatggcctat	360
gaccgctatg	ctgctatctg	cgcacccctc	cactatgcta	ccatcatgaa	tcgacgtctc	420
tgctgtatcc	tgggtggctct	ctcctggatg	gggggcttca	ttcattctat	aatacagggtg	480
gctctcattg	ttcgacttcc	tttctgtggg	cccaatgagt	tagacagtta	cttctgtgac	540
atcacacagg	ttgtccggat	tgctgtgccc	aacaccttcc	cagaggagtt	agtgatgac	600
tgtagttagt	gtctgatctc	tgtgggtgtg	ttcattgtct	tggttaatgtc	ctatgccttc	660
cttctggcct	tgtctcaagaa	acattcaggc	tcagatgaga	ataccaacag	ggccatgtcc	720
acctgctatt	cccacattac	cattgtgggtg	ctaattgttg	ggccatccat	ctacatttat	780
gctcgcccc	ttgactcatt	ttccctagat	aaagtgggtg	ctgtgtttca	tactgtaata	840
ttccctttac	ttaatcccat	tatttacaca	ttgagaaaca	aggaagtaaa	ggcagccatg	900
aggaaggtgg	tcaccaata	tattttgtgt	gaagagaag			939

<210> 228

<211> 940

<212> DNA

<213> Unknown (H38g77 nucleotide)

<220>

<223> Synthetic construct

<400> 228

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atacaaatat	ttgtttttgt	gttcttattt	tgtaatgttg	ccatcttggt	gggaaacttt	120
ctgatccctta	tctctatttg	atgtagtcct	ctttttaacc	aaccaatgca	ctatttcttc	180
aggctatatg	aatatctact	atacctcctg	tgacacaccc	aaaataattg	gtgatctagt	240
agtgggaaga	ataaacatct	cctatgatag	gagtccttcc	catgcacttc	tttggaatca	300
ttgaaatctt	catccttaca	gtcatggctt	ttgatcacta	tggtgccatc	tgcaaacctc	360
cccgtacact	aattatcatg	aataggacaa	aatacaatac	tctaactctg	gttgcttggc	420
tggttggggc	ttccattctt	tgtttcagtt	ttctatgaaa	atctggttgc	ctttctgtgg	480
ctccaacaaa	gttgatgact	aatattaaga	tatttttcc	ttactgaaag	tcgcttgtag	540
tgataccctg	atcactgggt	tcctcgtgg	tgccaattct	ggaatgtttg	ccttggtaac	600
cttgttctgt	cgtttggctc	ttatgtcatt	atactattcc	ccttaaaaaa	tcattcagta	660
gaggggaagat	gcaaagccct	ctctacctgt	ggatctcata	tcaccatggg	aatctttttc	720
ttcgaacctt	caatctttgc	ctaccttaga	ccttctcact	tttctgagg	acaaaatatc	780
tgctctgttt	tacactatta	ttgctccaat	gttcaaccac	ctaactctata	acctgagaaa	840
tacagagatg	aaaaaggcca	tgagaaaagt	ttggtaccaa	atatcatttt	cagaagaaaa	900
acagctgatt	tgtcctactt	agtgtactaa	agaactttat			940

<210> 229
 <211> 912
 <212> DNA
 <213> Unknown (H38g78 nucleotide)

<220>
 <223> Synthetic construct

<400> 229
 atgagaaatg gcacagtaat cacagaattc atcctgctag gctttcctgt tatccaaggc 60
 ctacaaacac ctctctttat tgcaatcttt ctcacctaca tattaaccct tgcaggcaat 120
 gggcttatta ttgccactgt gtgggctgag cccaggctac aaattccaat gtacttcttc 180
 ctttgtaact tgtctttctt agaaatctgg tacaccacca cagtcacccc caaactgcta 240
 ggaacctttg tagtggcaag aacagtaatc tgcattgtct gctgcctgct gcaggccttc 300
 ttccacttct tcgtgggcac caccgagttc ttgatcctca ctatcatgtc ttttgaccgc 360
 tacctacca tctgcaatcc ccttcaccac cccaccatca tgaccagcaa actctgcctg 420
 cagctggccc tgagctcctg ggtggtgggc ttcaccattg tcttttgta gacgatgctg 480
 ctcacccagt tgccattctg tggcaataat gttatcagtc atttctactg tgatgttggg 540
 cccagtttga aagcgcctg catagacacc agcatttttg aactcctggg cgtcatagca 600
 accatccttg tgatccagg gtcacttctc tttaatatga tttcttatat ctacattctg 660
 tccgcaatcc tacgaattcc ttcagccact ggccaccaa agactttctc tacctgtgcc 720
 tcgcacctga cagttgtctc cctgctctac ggggctgttc tgttcattga cctaagaccc 780
 acagcacact cctcctttaa gattaataag gtggtgtctg tgctaaatac tatcctcacc 840
 ccccttctga atccctttat ttatactatt agaaacaagg aggtgaaggg agccttaaga 900
 aaggcaatga ct 912

<210> 230
 <211> 963
 <212> DNA
 <213> Unknown (H38g79 nucleotide)

<220>
 <223> Synthetic construct

<400> 230
 atgacaattc ttcttaatag cagcctccaa agagccactt tcttcttgac gggcttccaa 60
 ggtctagaag gtctccatgg ctggatctct attcccttct gcttcatcta cctgacagtt 120
 atcttgggga acctcaccat tctccacgtc atttgtactg atgccactct ccatggaccc 180
 atgtactatt tcttgggcat gctagctgtc acagacttag gcctttgcct ttccacactg 240
 cccactgtgc tgggcatttt ctggtttgat accagagaga ttggcatccc tgccctgttc 300
 actcagctct tcttcatcca caccttgtct tcaatggagt catcagttct gttatccatg 360
 tccattgacc gctacgtggc cgtctgcaac ccactgcatg actccaccgt cctgacacct 420
 gcatgtattg tcaagatggg gctaagctca gtgcttagaa gtgctctcct catcctcccc 480
 ttgccattcc tctgaagcg cttccaatac tgccactccc atgtgctggc tcatgcttat 540
 tgtcttcacc tggagatcat gaagctggcc tgccttagca tcattgtcaa tcacatctat 600
 gggctctttg ttgtggcctg caccgtgggt gtggactcac tgctcatctt tctctcatac 660
 gccctcatcc ttcgcaccgt gctcagcatt gcctcccacc aggagcgact ccgagccctc 720
 aacacctgtg tctctcatat ctgtgctgta ctgctcttct acatcccat gattggcttg 780
 tctcttgtgc atcgctttg tgaacatctg cccgcgctt tacacctctt catgtcctat 840
 gtgtatctgc tggtaaccac cttatgaac cccatcatct acagcatcaa gaccaagcaa 900
 attcgccagc gcatcattaa gaagtttcag ttataaagt cacttaggtg tttttggaag 960
 gat 963

<210> 231
 <211> 968
 <212> DNA
 <213> Unknown (H38g80 nucleotide)

<220>
 <223> Synthetic construct

<400> 231
 atggggaacc acaccaccgt caccgagttt gtctgtctgg ggctctcaga gacctgtgag 60
 ctgcagatgc tcatcttctc ggggctctct ctgacctacc tctcacact gctggggaat 120
 ctggtcatcg tgggtcatcac cctcatggac aggcgcctcc acaccaccat gtactacttc 180
 ctccgcaact ttgctgtccc ggagatctgg ttcacctcgg tcatctttcc caagggtgctg 240
 gccaacatcc tcacaggata caagaccatt cctcccagg ctgcttctctg caaagtttgc 300
 tctatttttt cttgggcacc acagagttct tctcctggc ggtgatgtcc ttgacagggt 360
 acgtggccgt atgtaaccct ttgcattatg ccaccatcat gagcaaaagg gtctgtgtcc 420
 agctagtctt ctgttagtgg atgacaggat tcttctcat cattattcca agttttcttg 480
 tctttcagca gccattctgt ggccccaaca tcattaacca tttcttctgt gacaactttc 540
 cctcttgaa actcatttgt gcagacatga ctctgataga gctcctgggt tttgttatag 600
 ccaacgtcag cttactgggc actctgtcta tgacggccac ttgctatggc cacatcctcc 660
 acgccattct gcacatcccc tcagccaaag agaagcagaa agccttctcc gcctgtcctt 720
 cccacatcat tgtcgtgtct ctcttctatg gcagctgcat cttcatgtac attcagtcag 780
 gcaagagtga ccagaaggaa gacaggaaca aggtggcggc attgcttaac accgtggtga 840
 cctgatgct caacccttc atctacacc tgaggaacaa acaggtgaaa caggtgttta 900
 ggcagcagggt gagcaaacct ctcataataa gctgtgtaaa aaaaaaactg aagctcagca 960
 tccccaga 968

<210> 232

<211> 949

<212> DNA

<213> Unknown (H38g81 nucleotide)

<220>

<223> Synthetic construct

<400> 232
 gaaataaaga tagcaaacaa cacagtagtg acagaattta tcctccttgg tctgactcag 60
 tctcaagata ttcagctctt ggtctttgtg ctgatcttaa ttttctacct tatcatcctc 120
 cctggaaatt tctcatcat tttcaccata aagtcagatc ctgggctcac agcacccttc 180
 tatttctttc tgggcaactt ggcccttctg gatgcacctt actccttcat tgtgggtccc 240
 cggatgttgg tggacttctt ctctgcgaag aatgtaatct cctacagagg ctgcatcact 300
 cagctctttt tcttgcaact ccttggagga ggagagggat tactccttgt gatgtagcct 360
 ttgaccgcta catcgccatc tgccggcctc tgcactattc tactctcatg aaccccagag 420
 cttgctatgc aatgatgttg gctctgtggc ttgggggttt tgtccactcc attatccagg 480
 tggctctcat cctcgccttg cctttttgtg gcccaaacca gctggacaac ttcttctgtg 540
 atgtcccaca ggtcatcaag ctggcttgca ccgacacgtt tgtgggtggag cttctgatgg 600
 tcttcaacag tggcctgatg acaactcctgt ctttctgggg cttctggcct cctatgcagt 660
 catcctgtgc catgttcgta aggcagcttc tgaattgaag aacaaggcca tgtccacgtg 720
 caccactcat gtcattatta tacttcttat gtttggacct gctatcttca tctacatgca 780
 ccccttcagg gccttaccag ctgacaagggt ggtttctttc ttccacacag tgatctttcc 840
 attgatgaat cctatgattt atacccttcg aaaccaggaa gtgaaaactt ccatgaagag 900
 gttattgagt cgacatgtag tctgtcaagt ggactttata ataagaaac 949

<210> 233

<211> 857

<212> DNA

<213> Unknown (H38g82 nucleotide)

<220>

<223> Synthetic construct

<400> 233
 gtcatacgaa accagacaat ggtaactgaa ttcacccgggt ctcccttctt gctgtccagg 60
 agcttcagat ttggctatgt gtccttctct ggctgggttca tatgctcacc ataacaggaa 120
 accttttctg cattttctta acgtggacag ataattgtct ccaaacccca atggacttgt 180
 tccttagaaa aaagtcatat cgttctcttg ctgcatcacc caaatatatt tctacttctt 240
 tctagggaca gtggcgttta tccccttggc agtgacatcc ttcaaact gcatggcaac 300
 ctgtgacccc ctgtgcagca ccatcattgc aaaaagcagg gcctgcctcc tgtgggtctt 360
 gggatgctgg atgggaacct tcctggctgt gttgcgcctg actattgtgg tgtccagggt 420

gccagactgt	actgaaaaaa	ttagtccctt	cttctgtgac	attgcctctt	tactgcaggt	480
ggcctgtatt	gatattcatt	tcattgagat	gataagcttc	ctttgatcat	ctcttatggg	540
cctgacctcg	ctgggtgctta	atgccacatc	ctacgcctac	atcattttctc	cctcctgtgc	600
atccccctcag	cccaaggatg	tcaggaggcc	ttttccacct	gtgcttcaca	catcaccatc	660
atctttattg	cctgccgaaa	ctccatctcc	acgtgtgtga	ggcctaacc	gaggtattag	720
ctggattttg	acaaagtgc	agctatcctc	actatagtag	tgacttcttt	tctgaatccc	780
cgcatttata	gcttgaggta	aaggaagtat	gaagggagtc	aatttgcaca	atactgtcac	840
cacattccaa	aggaaca					857

<210> 234

<211> 921

<212> DNA

<213> Unknown (H38g83 nucleotide)

<220>

<223> Synthetic construct

<400> 234

atggaaagcg	agaacagaa	agtgataaga	gaattcatcc	tccttgggtct	gaccaggtct	60
caagatattc	agctcctggg	ctttgtgcta	gttttaatat	tctacttcat	catcctccct	120
ggaaattttc	tcattatttt	caccataaag	tcagaccctg	ggctcacagc	ccccctctat	180
ttctttctgg	gcaacttggc	cttctctggat	gcactcctact	ccttccactgt	ggctccccgg	240
atgttgggtg	acttctctct	tgcaagaag	ataatctcct	acagaggctg	catcactcag	300
ctctttttct	tgcacttctt	tggaggagg	gagggattac	tccttgttgt	gatggccttt	360
gaccgctaca	tcgccatctg	cgggcctctg	cactatccta	ctgtcatgaa	ccctagaacc	420
tgctatgcaa	tgatgttggc	tctgtggctt	gggggttttg	tcacttccat	tatccagggtg	480
gtcctcatcc	tccgcttggc	tttttggggc	caaaccagc	tggacaactt	cttctgtgat	540
gtcccacag	tcataagct	ggcctgcacc	gacacatttg	tgggtggagct	tctgatggtc	600
ttcaacagtg	gcctgatgac	actcctgtgc	tttctggggc	ttctggcctc	ctatgcagtc	660
attctttgtc	gcatacagag	gtcttcttct	gaggcaaaaa	acaaggccat	gtccacgtgc	720
atcacccata	tcattgttat	attcttcatg	tttggacctg	gcattctcat	ctacacgcgc	780
cccttcaggg	ctttcccagc	tgacaagggtg	gtttctctct	tcacacagct	gatttttctt	840
ttgttgaatc	ctgtcattta	tacccttcgc	aaccaggaag	tgaaagcttc	catgaaaaag	900
gtgtttaata	agcacatagc	c				921

<210> 235

<211> 927

<212> DNA

<213> Unknown (H38g84 nucleotide)

<220>

<223> Synthetic construct

<400> 235

atggaaaatc	aaaacaatgt	gactgaattc	attctttctg	gtctcacaga	gaacctggag	60
ctgtggaaaa	tattttctgc	tgtgtttctt	gtcatgtatg	tagccacagt	gctggaaaat	120
ctactatttg	tggttaactat	tatcacaagt	cagagtctga	ggtcacctat	gtattttttt	180
cttaccttct	tgctcccttt	ggatgtcatg	ttctcatctg	tcgttgcccc	caagggtgatt	240
gtagacaccc	tctccaagag	cactaccatc	tctctcaaag	gctgcctcac	ccagctgttt	300
gtggagcatt	tctttgggtg	tgtggggatc	atcctcctca	ctgtgatggc	ctatgaccgc	360
tacgtggcca	tctgtaagcc	cctgcactac	acgatcatca	tgagtcacag	ggtgtgctgc	420
ctaattggtg	gaggggcttg	ggtgggggga	tttatgcacg	caatgatata	acttctcttc	480
atgtatcaaa	tacccttctg	tggtcctaata	atcatagatc	actttatatg	tgatttggtt	540
cagttgttga	cacgttgctg	cacggacacc	cacatcctgg	gcctcttagt	taccctcaac	600
agtgggatga	tgtgtgtggc	catctttctt	atcttaattg	cgctctacac	ggctaccta	660
tgctccctga	agtcttacag	ctctaaagg	cggcacaaag	ccctctctac	ctgcagctcc	720
cacctcacgg	tggttggtatt	gttctttgtc	ccctgtatct	tcttgtacat	gaggcctgtg	780
gtcactcacc	ccatagacaa	ggcaatggct	gtgtcagact	caatcatcac	acccatgtta	840
aatcccttga	tctatacact	gaggaatgca	gaggtgaaaa	gtgccatgaa	gaaactctgg	900
atgaaatggg	aggcctttggc	tgggaaa				927

<220>

<223> Synthetic construct

<400> 456

atggaaccaa	gaaaccaaac	cagtgcac	caattcatcc	tcttgggact	ctcagaaaag	60
ccagagcagg	agacgcttct	cttttccctg	ttcttctgca	tgtacctggt	catggctgtg	120
gggaacctgc	tcatacatct	ggccatcagc	atagactccc	acctccacac	ccccatgtac	180
ttcttcttgg	ccaacctgtc	cctgggtgat	ttctgtctgg	ccaccaaacac	catccctaag	240
atgctgggtga	cccttcaaac	cgggagcaag	gccatctctt	atccctgctg	cctgatccag	300
atgtacttct	tccatttctt	tggcatcgtg	gacagcgtca	taatcgccat	gatggcttat	360
gaccgggttcg	tggccatctg	ccacccattg	cactacgcca	agatcatgag	cctacgcctc	420
tgtcgccctgc	tggctggcgc	cctctgggcg	ttttctctgt	tcatactact	cactcacatc	480
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atccttgtgg	ccatcatgaa	ggccccctct	gcaggcggca	ggaagaaagc	cttctccacc	720
tgcagctccc	acctgtctgt	ggttgctctc	ttctatggga	ccaccattgg	cgtctatctg	780
tgtccctcct	cggctctcac	cactgtgaag	gagaaagctt	ctgcggtgat	gtacacagca	840
gtcaccccca	tgtctgaatcc	cttcactctac	agcttgagga	acagagacct	gaaaggggct	900
ctcaggaagc	tgggtcaacag	aaagatcacc	tcattcttcc			939

<210> 457

<211> 295

<212> DNA

<213> Unknown (H38g306 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(295)

<223> n = A,T,C or G

<400> 457

atgtcagcct	ccagtatcac	ctcaacacat	ccaacttcct	tcttgttgat	ggggattcca	60
ggcctggagc	acctgcacat	ctggatctcc	atccccctct	cagcatatac	actggccctg	120
cttggaaact	gcactctcct	tctcatcatc	caggctgatg	cagccctcca	tgaacccatg	180
tacctcttct	tggccatgtt	ggcagccatc	gaccagctct	ctatctctct	agcactgccc	240
ccgggacaga	cgggtgattct	ggttcacgga	tcngaagaat	aaaccctttg	ccggg	295

<210> 458

<211> 960

<212> DNA

<213> Unknown (H38g307 nucleotide)

<220>

<223> Synthetic construct

<400> 458

atgccatctg	cctctgccat	gatcattttc	aacctgagca	gttacaatcc	aggacccttc	60
attctggtag	ggatcccagg	cctggagcaa	ttccatgtgt	ggattggaat	tccttctgtt	120
atcatctaca	ttgtagctgt	tgtgggaaac	tgcatecttc	tctacctcat	tgtgggtggag	180
catagtcttc	atgaacccat	gttcttcttt	ctctccatgc	tggccatgac	tgacctcatc	240
ttgtccacag	ctgggtgtgcc	taaagcactc	agtatctttt	ggctaggggc	tcgcgaaatc	300
acattcccag	gatgccttac	acaaatgttc	ttccttcaat	ataactttgt	cctggattca	360
gccattctga	tggccatggc	atttgatcac	tatgtagcta	tctgttctcc	cttgagatat	420
accaccatct	tgactcccaa	gaccatcatc	aagagtgcta	tgggcatctc	ctttcgaagc	480
ttctgcatca	tcctgccaga	tgtattcttg	ctgacatgcc	tgcctttctg	caggacacgc	540
atcatacccc	acacatactg	tgagcatata	ggtgttgccc	agctcgcttg	tgctgatatc	600
tccatcaact	tctgggtatgg	cttttgtgtt	cccatcatga	cggctcatctc	agatgtgatt	660

ctcattgctg	tttctacgc	acacatcctc	tgtgctgtct	ttggccttcc	ctcccaagag	720
gcctgccaga	aagccctcgg	cacttgtggt	tctcatgtct	gtgtcatcct	catgttttat	780
acacctgcct	ttttctccat	cctcgcccat	cgctttggac	acaatgtctc	tcgcaccttc	840
cacatcatgt	ttgccaatct	ctacattggt	atccccctg	cactcaacct	catggtttac	900
ggagtgaaga	ccaagcagat	cagagataag	gttatacttt	tgttttctaa	gggtacagga	960

<210> 459

<211> 936

<212> DNA

<213> Unknown (H38g308 nucleotide)

<220>

<223> Synthetic construct

<400> 459

atgagcggga	caaaccagtc	gagtgtctcc	gagttcctcc	tcctgggact	ctccaggcag	60
ccccagcagc	agcatctcct	ctttgtgttc	ttcctcagca	tgtacctggc	cactgtcctg	120
gggaacctgc	tcatcatcct	gtccgtaagc	atagactcct	gcctgcacac	ccccatgtac	180
ttcttcctca	gcaacctgtc	ttttgtggac	atctgtttct	ccttcaccac	cgccccaaag	240
atgctggcca	atcacatact	cgagactcag	accatctcct	tctgtggctg	tctcacacag	300
atgtatttcg	ttttcatggt	cgtggacatg	gacaatttcc	tcctagctgt	gatggcctat	360
gaccactttg	tcgccgtgtg	ccacccttta	cattacacag	caaagatgac	ccatcagctc	420
tgtgccctgc	tggttgctgg	attatgggtg	gttgccaacc	tgaatgtcct	tctgcacacc	480
ctgctgatgg	ctccactctc	attctgtgca	gacaatgcca	tcactcactt	cttctgcgat	540
gtgactcccc	tactgaaact	ctcctgctca	gacacacacc	tcaatgaggt	cataatcctt	600
agtgaggggtg	ccctgggtcat	gatcacccca	tttctttgca	tcctggcttc	ttatatgcac	660
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aacctctctg	cctcccactc	agctgagaaa	gacactatgg	ctactgtgtt	gtatacagta	840
gtgactccca	tgctaaacct	tttcatctac	agcctgagga	acaggtactt	gaaaggggct	900
ctgaaaaaag	tagttggcag	ggtgggtgtt	tctgtc			936

<210> 460

<211> 762

<212> DNA

<213> Unknown (H38g309 nucleotide)

<220>

<223> Synthetic construct

<400> 460

atgtactttct	tcttgcccca	actctcagtg	gtggagctct	tctacaccac	tgacatcgtg	60
cccaggaccc	tgcccaatct	gggtcccccg	catccccagg	ccatctcttt	ccagggctgt	120
gcagcccata	tgtacgtctt	cattgtcctg	ggcatctcgg	agtgtgcctt	gctcactgcc	180
atggcctatg	accgatatgt	tgccatctgc	cagccctac	gctattccac	cctcttgagc	240
ccacgggcct	gcatggccat	ggtgggtacc	tcttggtcca	caggcatcat	cacggccacc	300
acccatgcct	ccctcatctt	ctctctacct	tttcgcagcc	acccgatcat	ccgcactttt	360
ctctgtgaca	tcttgccagt	actgaggctg	gcaagtgtctg	ggaagcacag	gagcgagatc	420
tccgtgatga	cagccaccat	agtcttcatt	atgatccctt	tctctctgat	tgtcacctct	480
tacatccgca	tcttggtgct	catcctagca	atggcctcca	cccagagccg	ccgcaaggct	540
ttctccacct	gtcctcccca	tctgtctcgtg	gtctctctct	tctttggaac	agccagcatc	600
acctacatcc	ggcgcaggc	aggctcctct	gttaccacag	accgcgtcct	cagtctcttc	660
tacacagtca	tcacacccat	gctcaacccc	atcatctaca	cccttcggaa	caaggacgtg	720
aggagggccc	tgcgacactt	ggtgaagagg	cagcgcctct	ca		762

<210> 461

<211> 998

<212> DNA

<213> Unknown (H38g310 nucleotide)

<220>

<223> Synthetic construct

<400> 461

atggatggag	agaatcactc	agtggatatc	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tcctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcattgtgtt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	tcagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggtgggtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagccctccc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggaccc	ttgttgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taattttacc	ttctgtggcc	ctaattgtgt	ggacagcttc	tactgtgacc	540
ttcctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
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cacaccctaa	ttcacagatg	gacaagtttc	tggtctattt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaac	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 462

<211> 933

<212> DNA

<213> Unknown (H38g311 nucleotide)

<220>

<223> Synthetic construct

<400> 462

atggaagagt	acaacacatc	ctctacagac	ttcactttca	tggggctgtt	caacagaaag	60
gaaacctcag	gtcttatttt	tgccatcatc	tctatcatct	tcttcaccgc	actgatggcc	120
aatgggggta	tgatcttctc	gatccaaaca	gatttgcgcc	ttcatacacc	catgtacttc	180
ctcctcagcc	acctttcctt	aattgacatg	atgtatatatt	ccactattgt	gcctaagatg	240
ctgggttaatt	acctgctgga	tcaaaggacc	atttcctttg	tgggggtgcac	agctcaaacac	300
ttcctctacc	ttacccttgt	gggagctgaa	ttcttctctg	tgggcctcat	ggcctatgac	360
cgctatgtgg	ccatttgcaa	ccctctgaga	taccctgtcc	tcattgagccg	ccgggtctgt	420
tggatgatta	tagcagggtc	ctgggttggg	ggctctttgg	atggcttctc	cctaaccccc	480
atcaccatga	gctttccctt	ctgcaattcc	cgggagatta	accacttctt	ctgcgaggca	540
ccagcagtc	tgaagttggc	atgtgcagac	acagccctct	acgagacagt	gatgtatgtg	600
tgctgtgttt	tgatgctgct	gattcctttc	tctgtagtcc	ttgcttccta	tgcccgaatc	660
ctgactacag	ttcagtgcac	gagctcagtg	gagggcagga	agaaggcatt	tgccacttgc	720
tcateccaca	tgactgtggg	gtccttgttc	tacggggctg	ccatgtacac	ctacatgctg	780
ccacattctt	accacaagcc	agcccaggac	aaagtctctc	ctgtgtttta	caccattctc	840
acacccatgc	tgaacccctc	catctacagc	cttagaaaca	aggatgtgac	tggagctctg	900
aagagggcct	tggggagggt	caagggctct	caa			933

<210> 463

<211> 883

<212> DNA

<213> Unknown (H38g312 nucleotide)

<220>

<223> Synthetic construct

<400> 463

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ggaaaccggg	aaatagccag	attcctctcc	aacctgtcct	tggctggcat	cggtttcccc	120
tccaccatag	tctccaagat	gattgtggac	atccagtctc	acagcagagt	catctcctat	180
gcgggctgcc	tgactcaggt	atctcttttt	gccgtttttg	gatgcatgga	agacatgctt	240
ctgagtgtga	tggcttatga	ccggtttgtg	gacatctgtc	accctctgga	ttatccagtc	300

atcatgaacc	catgtttctg	tggcttccta	gttttggtgt	ctttttttct	cagtctttta	360
gactcccage	tgcacaattg	gattgcctta	caaattacct	gcttcaagga	tgtggaaatt	420
cccaatttct	tctgtgacct	ttctcaactc	ccccaccctt	gcctgttggtg	acaccttcac	480
caatgacata	gtcatgtatt	tccttgctgc	catatttggt	tttcttccca	tttcggggcc	540
ttttctctta	ctataaaatt	gtttcctcca	ttctgagggt	ttcatcatca	ggagggaagt	600
ataaagcctt	ctccacctgt	ggctctcacc	tgctcagttg	ttgcttattt	tatggaacag	660
gctttggagg	ggacctcagt	tcagacatgt	cctcttatcc	cagaaaaggt	gcagtggcct	720
cagtgatgta	cacggtgggt	actcccatgc	tgaacccatt	catttacagc	ctaacagggg	780
aattaaaagt	gccctgcggc	agctgcactg	cagaatagtc	taatctcatt	ttcttattat	840
ctgttccatt	ccttccgtag	tgtgagttag	aaaaggcagc	aag		883

<210> 464

<211> 942

<212> DNA

<213> Unknown (H38g313 nucleotide)

<220>

<223> Synthetic construct

<400> 464

atgaccctgg	gatccctggg	aaacagcagc	agcagcgttt	ctgctacctt	cctgctgagt	60
ggcatccctg	ggctggagcg	catgcacatc	tggatctcca	tcccactgtg	cttcatgtat	120
ctggtttcca	tcccgggcaa	ctgcacaatt	cttttttatca	ttaaaacaga	gcgctcaact	180
catgaacctc	tgtatctctt	cctgtccatg	ctggctctga	ttgacctggg	tctctccctt	240
tgcactctcc	ctacagtcct	gggcatcttt	tgggttgagg	cacgagaaat	tagccatgat	300
gcctgctttg	ctcagctctt	ttccattcac	tgcttctcct	tcctcgagtc	ctctgtgcta	360
ctgtctatgg	cctttgaccg	ctttgtggct	atctgccacc	ccttgcaacta	tgtttccatt	420
ctcaccaaca	cagtcattgg	caggattggc	ctggctctctc	tgggtcgtag	tgtagcactc	480
atttttccat	taccttttat	gctcaaaaaga	ttcccctatt	gtggctcccc	agttctctca	540
cattcttatt	gtctccacca	agaagtgatg	aaattggcct	gtgccgacat	gaaggccaac	600
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ttctcttatg	ctctgatcct	ggcaccgtg	ctgtccatcg	cctccagggc	tgagagattc	720
aaggccctta	acacctgtgt	ttcccacatc	tgtgctgtgc	tgtctcttcta	cactcccatg	780
attggcctct	ctgtcatcca	tcgcttttga	aagcaggcac	cccacctggg	ccagggtggtc	840
atgggtttca	tgtatcttct	ctttctctct	gtgatgaatc	ccattgtcta	cagtgtgaag	900
accaaacaga	tccgggatcg	agtgaacgat	gccttttgtt	ac		942

<210> 465

<211> 990

<212> DNA

<213> Unknown (H38g314 nucleotide)

<220>

<223> Synthetic construct

<400> 465

atgggactct	tcagacaatc	caaacatcca	atggccaata	tcacctggat	ggccaaccac	60
actggatggg	cggatttcat	cctgttgagg	ctcttcagac	aatccaaaca	tccagcacta	120
ctttgtgtgg	tcatttttgt	ggttttcctg	atggcggtgt	ctggaaatgc	tgtcctgac	180
cttctgatac	actgtgacgc	ccacctccac	acccccatgt	actttttcat	cagtcaattg	240
tctctcatgg	acatggcgta	cattttctgtc	actgtgccca	agatgctcct	ggaccaggtc	300
atgggtgtga	ataagatctc	agccccctgag	tgtgggatgc	agatgttctt	ctacgtgaca	360
ctagcagggt	cagaattttt	ccttctagcc	accatggcct	atgaccgcta	cgtggccatc	420
tgccatcttc	tccgttacct	tgtcctcatg	aacctatagg	tgtgtctctt	cctgtcatca	480
ggctgctggg	tcctgggctc	agtggaatgc	ttcacattca	ctcccatcac	catgaccttc	540
cccttccgtg	gatcccgga	gattcatcat	ttcttctgtg	aagttcctgc	tgtattgaat	600
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acccctgaga	aggacatgat	ggtatctgtc	ttctatacca	tcctcactcc	agtgggtgaac	900

cctttaatct atagtcttag gaataaggat gtcattggggg ctctgaagaa aatgttaaca 960
gtggaacctg cctttcaaaa agctatggag 990

<210> 466
<211> 591
<212> DNA
<213> Unknown (H38g315 nucleotide)

<220>
<223> Synthetic construct

<400> 466
gctgccatgg cttaagaccg gtacatagca atctgtaacc cgctgctcta tacagtgatt 60
atgtccaaga aggtttgttg ccagcttgca attggagcat ttttgggggg cactatgagc 120
tcaattattc ataccacgaa cactttccat ctgtcattct gctccagaga tattaaccat 180
ttcttttgtg atatctcccc actcttctct ctgtcctgca ctgacacata catgcatgac 240
atcattcttg tggcttttgc cagttttgtg gaagcaatct gtcttctatc agttctcctt 300
tcttatgtct tcattatggc agctattctt agaacagggt ctgtggaggg aagaagaaga 360
gggttctcca cttgtgcttc ccacctgact gtggctcacta tgtatcatgg taccttgatc 420
ttcatttatt tgcgtccag cactggccat tcaactggata ttgacaaagt gacctctgtg 480
ttctatactt tgattatacc tatgttgaac cctctaattt acagtctaag gaacaaagat 540
gtcaaaaatg ctttttagaaa agtgattggc cgaaaattac ttctttaagg t 591

<210> 467
<211> 938
<212> DNA
<213> Unknown (H38g316 nucleotide)

<220>
<223> Synthetic construct

<400> 467
atgatgactc ttaagaactg cactgtgttt actgacttta tattcttagg actttcaggt 60
acacaggata tacagcaggg gctctttgtg cttttcttcc tgatttatgg cataactgtg 120
attgtcaatc tagggatgat cctactgatc aagatggatc tcagacttca cacaccctg 180
tattatttcc tgagcaattt gtctttctgt gatgtctgct actcttccac gtctctccca 240
aatgctagct gatttcttat cggacaaaaa gtggattccg tataatttat gtgccattca 300
gatgtattta tttggagtct ttgcagatgt ggaatgtctc atgttggttg tcatggccta 360
tgatcggtat gttgccattt gcaatccact tctttatacg atcactatgc ccaggaggat 420
ctgcaccag ctagtggtct ttgcctatgt ttaggttttg gtggattctg caatccacac 480
ctgctgcaca ttcagattgt cattctgcaa ttctaattgc atcaatcact ttttctgtga 540
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tcacattcgt tggctgtgtt gcgggggtgca gcattgtcac tgtcttctc tctacagct 660
acatcataat taccatcctt aaaatgagct cagctgaggg cagacggaaa gccttctcta 720
cctgcacctc ccacttgatg gccgtggctg tatttcatgg cacactcctg ttcattgtatt 780
tccgacccag ttcaagttac tcaatggaaa cagacaaaat ggcctctgtt ttctacacag 840
ttgtcatacc tatgttaaat ccactgatct acagcttaag gaatagggat gtgaaaggtg 900
ctctgaaaaa agcaataagc actaaattat attctgta 938

<210> 468
<211> 969
<212> DNA
<213> Unknown (H38g317 nucleotide)

<220>
<223> Synthetic construct

<400> 468
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ttgctggtgg gcatgccagg cctatcaggt gcaccctcct ggtggacatt gccctcatt 120
gctgtctacc ttctctctgc actgggaaat ggcaccatcc tctggatcat tgcctgacg 180

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cccgccctgc accgcccaat gcacttcttc ctcttcttgc ttagtggtgc tgatattgga 240
ttggctcactg ccctgatgcc cactactgctg ggcacgcgcc ttgctgggtgc tcacactgtc 300
cctgcctcag cctgccttct acagatgggtt tttatccatg tcttttctgt catggagtcc 360
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ccagcgctcc tcaccaatgg tgtaattagc aaaatcagcc tggccatttc ttttcgatgc 480
ctgggtctcc atctgcccct gccattcctg ctggcctaca tggcctactg cctcccacag 540
gtcctaaccg attcttattg cttgcatcca gatgtgggtc gtttggcctg cccagaagct 600
tggggtgcag cctacagcct atttgtgggt ctttcagcca tgggtttgga cccctgctt 660
attttcttct cctatggcct gattggcaag gtgttgcaag gtgtggagtc cagagaggat 720
cgctggaagg ctggtcaaac ctgtgctgcc cactctctg cagtgtcctt cttctatata 780
cctatgatcc tcttggcact gattaacccat cctgagctgc caatcactca gcatacccat 840
actcttctat cctatgtcca tttccttctt cctccattga taaacctat tctctatagt 900
gtcaagatga aggagattag aaagagaata ctcaacaggt tgcagcccag gaaggtgggt 960
ggtgctcag 969

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<210> 469

<211> 384

<212> DNA

<213> Unknown (H38g318 nucleotide)

<220>

<223> Synthetic construct

<400> 469

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tctcgctcag atacacaggt caatgagtta gtgttattca ccgtctttgg ttttattgaa 60
ctgagtacca tttcaggagt tttcatttct tattgttata tcactctatc agtcttggag 120
atacactctg ctgaggggag gttcaaagct ctctctacat gcacttccca cttatctgcg 180
gttgcaattt tccaggggaa tctgtctctt atgtatttcc ggccaagttc ttcctattct 240
ctagatcaag ataaaatgac ctcatgtgtt tacacccttg tggttcccat gttgaacccc 300
ctgatttata gcctgaggaa caaggatgtg aaagaggccc tgaaaaaact gaaaaataaa 360
attttatttt aaggaaatag taaa 384

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<210> 470

<211> 946

<212> DNA

<213> Unknown (H38g319 nucleotide)

<220>

<223> Synthetic construct

<400> 470

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atgtttctgc tcaatacctc agaagttgaa gtctccacat tcctattgat tgggatacca 60
ggacttgagc atgcacacat ttggatctct atccccatct gccttatgta cctcatggcc 120
atcctgggca actgcacat cctatttgtt atcagaacag agcattccct gcaagagccc 180
atgtactatt tctctccat gctggccctg tccgacctgg gcctgtcttt ctctcccta 240
cccacgatgc tgagaatctt cttgttcaac aacatgggga tttctgctga tacatgcatt 300
gcccaggaat tcttcatcca tggattcaca gacatggagt cttcagttct cctaatactg 360
tcctttgatc acttagtagc catttgcaac cccctaagat atagctctat tctcaccagc 420
ttcaggggtt tgcaaattgg actggctttt gccattaaaa gcattctcct agtgctaccc 480
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catgcgtcgc tttgctaagc ataaatcccc tttagctatg attctgatag cagatgcatt 840
cttgtctgta ccacccttga tgaatcccat tgtgtattgt gtaaaaaactc ggcagattag 900
agtaaaggct ctggaaaaat tggctctgaa gcctaaatga tggggc 946

```

<210> 471

<211> 942

<212> DNA

<213> Unknown (H38g320 nucleotide)

<220>

<223> Synthetic construct

<400> 471

atgatggcat	ctgaaagaaa	tcaaagcagc	acaccactt	ttattctctt	gggtttttca	60
gaataccag	aaatccaggt	tccactcttt	ctggttttct	tgttcgtcta	cacagtcact	120
gtagtggga	acttgggcat	gataataatc	atcagactca	attcaaaact	ccatacaatc	180
atgtgctttt	tccttagtca	cttgctcttg	acagacttct	gtttttccac	tgtagttaca	240
cctaaactgt	tggagaactt	ggttggtgaa	tacagaacca	tctctttctc	tggttgcac	300
atgcaatttt	gttttgcttg	catttttggg	gtgacagaaa	ctttcatgtt	agcagcgatg	360
gcttatgacc	gttttggtgc	agtttgtaaa	cccttgctgt	ataccactat	tatgtctcag	420
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ctcacatatt	ttcttcttga	cttatcgttt	tgtgaatcta	ccttcataaa	taattttatc	540
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tgctttatta	ttgccatatt	caatgaggtg	agcagcctaa	ttatcattct	gacatcatat	660
atgcttattt	tcactaccat	tatgaagatg	cgatctgcaa	gtgggcgcca	gaaaactttc	720
tccactgttg	ctctccacct	gacagccatc	actatcttcc	atggaactat	ccttttccct	780
tactgtgttc	ctaataccta	aacttctagc	ctcatagtta	cagtggcttc	tgtgttttac	840
acagtggcga	ttccaatgct	gaaccatttg	atctacagcc	ttaggaacaa	agatatcaat	900
aacatgtttg	aaaaattagt	tgtcaccaaa	ttgatttacc	ac		942

<210> 472

<211> 965

<212> DNA

<213> Unknown (H38g321 nucleotide)

<220>

<223> Synthetic construct

<400> 472

cacacagagc	cacggaatca	cacaggggtc	tgagaatttc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggtc	120
acggtgctga	ggaacctgct	cagcatcctg	gctgtccgct	ctgactcccc	cctccacaac	180
cccatgtact	tcttccctctc	caacctgtgc	tgggctgaca	tcgggtttcac	ctcggccacg	240
gttgccaaga	tgattgtgga	atgcagtcgc	atagcagagt	catctctcat	gcgggctgcc	300
tgacgcagat	gtctttcttg	gtcctttttg	catgtataga	aggcatgtct	ctgactgtga	360
tggcctatga	ctgctttgta	gccatctgtc	gtcctctgca	ctaccagtc	atcgtgaatc	420
ctcacctctg	tgtcttcttc	gttttggtgt	cctttttcct	tagcctgttg	gattcccagc	480
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tcgccacctg	tggctctcac	ctagcagttg	tttgctgatt	tgatggaaca	ggcattggta	780
tgtacctgac	ttcagctgtg	gcaccacccc	ctaggaattg	agtgggtggc	tcagtgtatg	840
aggctgtggt	cacccccatg	ctgaaccttt	tcacttacag	cctgagaaac	aggacatac	900
aaagtgcctt	gcggaggctg	ctcagcagaa	cagtcgaatt	tcatgatctg	tttcattctt	960
tttct						965

<210> 473

<211> 990

<212> DNA

<213> Unknown (H38g322 nucleotide)

<220>

<223> Synthetic construct

<400> 473

atgtcgggtc	tcaataatac	cattgctgag	cctctgatct	tcctcctgat	gggcattcca	60
ggcctgaaag	ccaccagta	ctggatctcc	atcccttttt	gtctcctata	tggtgttgcc	120

gtctctggaa	atagcatgat	cctgtttgtg	gtcctctgtg	aacggagcct	ccataagcct	180
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tctactaccc	ttggtgtctt	ctggtttgaa	gcccagagaa	tcaacctaaa	tgctgcatt	300
gcccagatgt	tctttctaca	cggatttact	ttcatggagt	ctgggggttct	actggccatg	360
gcctttgatc	gttttgtggc	catctgttac	ccactgagat	acactaccat	ccttaccaat	420
gcccgaattg	ccaagattgg	gatgagcatg	ttgataagaa	atgttgccgt	catgttgcca	480
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tgctaccatg	ttgatctcat	ccaactctcc	tgcacagaca	ataggatcaa	cagcatcctt	600
ggctgttttg	cgcttttgtc	cactacaggg	tttgactgcc	cttgcatcct	gctctcctat	660
atcctgatca	ttcgatctgt	cctcagcatt	gcttcctcag	aagagaggcg	gaaagccttc	720
aacacctgca	catccacat	cagtgtctgt	tccatcttct	acctccctct	catcagtttg	780
tctcttgtcc	atcgctatgg	ccattcagca	cctccatttg	tccacatcat	catggccaat	840
gtctttctgc	taatccctcc	tgtgtcaac	cctattatct	acagtgtaaa	gattaagcag	900
attcaaaagg	ccattatcaa	ggtcttaatt	cagaagcact	ccaaatctaa	tcacagcta	960
tttctgatta	gagataaagc	catttatgaa				990

<210> 474

<211> 942

<212> DNA

<213> Unknown (H38g323 nucleotide)

<220>

<223> Synthetic construct

<400> 474

atgatgatgg	ttttaaggaa	tctgagcatg	gagccacact	ttgccctttt	aggtttcaca	60
gattacccaa	agcttcagat	tcctctcttc	cttggttttc	tgctcatgta	tggtatcaca	120
gtggtaggaa	accttgggat	gatcataata	atcaagatta	accccaaatt	tcacactcct	180
atgtactttt	tccttagtca	cctctctttt	gttgattttt	gttactcttc	cattgtcact	240
cccaagctgc	ttgagaactt	ggtaatggca	gataaaaagca	tcttctactt	tagctgcactg	300
atgcagtact	tcctgtcctg	cactgctgtg	gtgacagagt	ctttcttgct	ggcagtgatg	360
gcctatgacc	gctttgtggc	catctgcaat	cctctgcttt	atacagtggt	catgtcacag	420
aggtctctgtg	ccctgctggg	ggctgggtca	tatctctggg	gcatgtttgg	ccccttggtta	480
ctcctttgtt	atgctctccg	gttaaaacttc	tctggaccta	atgtaatcaa	ccacttcttt	540
tgtgagtata	ctgctctcat	ctctgtgtct	ggctctgata	tactcatccc	ccacctgctg	600
cttttcagct	tcgccacctt	caatgagatg	tgtacactac	tgatcatcct	cacttcctat	660
gttttcattt	ttgtgactgt	actaaaaatc	cgttctgtta	gtgggcgcca	caaagccttc	720
tccacctggg	cctcccacct	gactgctatc	accatcttcc	atgggacct	ccttttcttc	780
tactgtgtac	ccaactccaa	aaactctcgg	caaacagtca	aagtggcctc	tgtattttac	840
acagttgtca	accccatgct	gaaccctccg	atctacagcc	taaggaataa	agacgtgaag	900
gatgctttct	ggaagttaat	acatacacaa	gttccatttc	ac		942

<210> 475

<211> 942

<212> DNA

<213> Unknown (H38g324 nucleotide)

<220>

<223> Synthetic construct

<400> 475

atggtgctgg	cttcagggaa	cagctcttct	catcctgtgt	ccttcactct	gcttggaaac	60
ccaggcctgg	agagtttcca	gttgtggatt	gcctttccgt	tctgtgccac	gtatgctgtg	120
gctgttggtg	gaaatatcac	tctcctccat	gtaatcagaa	ttgaccacac	cctgcatgag	180
cccatgtacc	tctttctggc	catgctggcc	atcactgacc	tggtcctctc	ctcctccact	240
caacctaaaga	tggtggccat	attctggttt	catgctcatg	agattcagta	ccatgcctgc	300
ctcatccagg	tggtcttcat	ccatgccttt	tcttctgtgg	agtctggggg	gctcatggct	360
atggccctgg	actgctacgt	ggctacctgc	ttccactcc	gacactctag	catcctgacc	420
ccatcggtcg	tgatcaaact	ggggaccatc	gtgatgctga	gagggctgct	gtgggtgagc	480
cccttctgct	tcatggtgtc	taggatgccc	ttctgccaac	accaagccat	tccccagtca	540
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tatgggctct	ttgtggcctt	ctctgtggct	ggctttgata	tgattgtcat	tggtatgtca	660
tacgtgatga	ttttgagagc	tgtgcttcag	ttgccctcag	gtgaagcccg	cctcaaagct	720
tttagcacac	gtgcctccca	tatctgtgtc	atcttggctc	tttatatccc	agcccttttt	780
tctttcctca	cctaccgctt	tggccatgat	gtgccccgag	ttgtacacat	cctgtttgct	840
aatctctatc	tactgatacc	tcccatgctc	aaccccatca	tttatggagt	tagaaccaaa	900
cagatcgggg	acagggttat	ccaaggatgt	tgtggaaaca	tc		942

<210> 476

<211> 860

<212> DNA

<213> Unknown (H38g325 nucleotide)

<220>

<223> Synthetic construct

<400> 476

tatatattgt	tagacatata	tatatgtcta	aacaacactc	atgtctaatt	gtgtgtagag	60
tcactagagg	caatttataa	taagttttta	ttttcttttt	tttctattgg	caataacatg	120
attttagtga	taaattttta	taattatgaa	aacataacag	tactttttta	aacataaaca	180
tttaaagaaa	aagttttcat	gattctttgt	tacatcttaa	catacatact	ctccctttta	240
agtaagttct	ttgcattggt	taaatctttg	cagacaaagc	tttcaagag	caagtcagtg	300
gaaactagta	gagcaggagt	tgagaaagcc	ctgtgcatta	tacactcacc	atgtcccaga	360
agttttgtct	catccatcca	gcaggatggt	agaccagggc	atataatcta	tccccggtca	420
ctcattttct	cattgtattg	cctattgtgg	gcacaatgta	gttaatatat	tttaaaataa	480
atattctggt	gccatttcag	attcgtgagt	tcactctggat	agcggatttt	tgtttgtttg	540
tttgttttgc	tttagtcaat	tttgattaat	taaggaatct	cagagtcctc	actccttagc	600
tttcattttc	aacttgtcta	aaaggcactt	tctgccagtg	cacatcaacc	ttctccaccc	660
atttcccaca	tttccaccat	ccttcctcac	tctagtgcac	taactccaaa	aactcacagg	720
caactgtgaa	agcacactct	gtatgttatg	ccatgttaat	ccccatgctg	aactcacaga	780
cttgtagcat	gcggtacaaa	aatgtgaatg	aatctctgca	gaagctgatg	gacttcaaaa	840
tattttagca	ttgaaagcaa					860

<210> 477

<211> 966

<212> DNA

<213> Unknown (H38g326 nucleotide)

<220>

<223> Synthetic construct

<400> 477

agtcacacag	agccatagaa	tctcacaagt	gtctcagaat	tccttctcca	gggactctca	60
gaggatccag	aactgcagcc	cgctctcgct	gggctgtccc	tgtccatgta	cctgggtcacg	120
gtgctgagga	acctgtctcat	catcctggct	gtcagctctg	actccacact	ccacaccccc	180
atgtacttct	tctctcccaa	cctctcctgg	gctgacattg	gtttcacctc	ggccatgggt	240
cccaagatga	ttgtggacat	gcagtcgcat	agcagagtca	tctcttaagc	gggctgcctg	300
acacagatgt	ctttctttgt	ccttttttgc	tgtatagaag	acatgctcct	gactgtgatg	360
gcctatgacc	aatttgtggc	catctgtcac	ccctgcacta	cccagtcac	atgaatcctc	420
acctctgtgt	cttcttagtt	ttggtttctt	ttttccttag	cctgttggat	tcccagctgc	480
acagttggat	tgtgttacaa	ttcaccttct	tcaagaatgt	ggaaatctct	aattttttct	540
gtgatccatc	tcaacttctc	aaccttgcc	gttctgacgg	catcatcaat	agcatattta	600
tatatattaga	tagtattctg	ttcagttttc	ttcccatctc	agggatcctt	ttgtcttact	660
ataaaattgt	ccccctcatt	ctaagaattt	catcgtcaga	tgggaagtat	aaagccttct	720
ccatctgtgg	ctctcacctg	gcagttgttt	gcttatttta	tggaaacagg	attggcgtgt	780
acctaaactc	agctgtgtca	ccacccccag	gaatggtgtg	gtggcgctcag	tgatgtatgc	840
tgtgggcacc	cccatgctga	actcttttat	ctacagcctg	agaaacaggg	acattcaaag	900
cgccctgtgg	aggctgcgca	gcagaacagt	cgaatctcat	gatctgttcc	atccttattc	960
ttgtgt						966

<210> 478

<211> 951

<212> DNA

<213> Unknown (H38g327 nucleotide)

<220>

<223> Synthetic construct

<400> 478

```

atgcaaccat ataccaaaaa ctggaccag gtaactgaat ttgtcatgat gggctttgct      60
ggcatccatg aagcacacct cctcttcttc atactcttcc tcaccatgta cctgttcacc      120
ttggtggaga atttggccat catttttagtg gtgggttttg accaccgact acggagaccc      180
atgtatttct tectgacaca cttgtectgc cttgaaatct ggtacacttc tgttacagtg      240
cccaagatgc tggctggttt tattgggggt gatggtggca agaatatctc ttatgctggt      300
tgcctatccc agctcttcat cttcaccttt cttggggcaa ctgagtgttt cctactggct      360
gccatggcct atgategtta tgtggccatt tgtatgcctc tccactatgg ggcttttgtg      420
tcctggggca cctgcatccg tctggcagct gcctgttggc tggtaggttt cctcacaccc      480
atcttgccaa tctacctctt gtctcagcta acattttgtg gcccaaagt cattgaccat      540
ttctcctgtg atgcctcacc cttgctagcc ttgtcgtgct cagatgtcac ttggaaggag      600
actgtggatt tctggtgtc tctggctgtg ctactggcct cctctatggt cattgctgtg      660
tcctatggga acatcgtctg gacactgctg cacatccgct cagctgctga gcgctggaag      720
gccttctcta cctgtgcagc tcacctgact gtgggtgagcc tcttctatgg cactcttttc      780
tttatgtatg tccagaccaa ggtgacctcc tccatcaact tcaacaaggt ggtatctgtc      840
ttctactctg ttgtcacgcc catgctcaat cctctcatct acagtcttag gaacaaggaa      900
gtgaaggagg ctctgggtcg agtcttttct ctcaactttt ggaagggaca g          951

```

<210> 479

<211> 936

<212> DNA

<213> Unknown (H38g328 nucleotide)

<220>

<223> Synthetic construct

<400> 479

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atggatggag agaatcactc agtgggtatct gagtttttgt ttctgggact cactcattca      60
tgggagatcc agctcctcct cctagtgttt tcctctgtgc tctatgtggc aagcattact      120
ggaaacatcc tcattgtgtt ttctgtgacc actgacctc acttacactc ccccatgtac      180
tttctactgg ccagtctctc cttcattgac ttaggagcct gctctgtcac ttctcccaag      240
atgatttatg acctgttcag aaagcgcaaa gtcattcctt ttggaggctg catcgtcaa      300
atcttcttca tccacgtcgt tgggtggtgt gagatggtgc tgctcatagc catggccttt      360
gacagatatg tggccctatg taagccctc cactatctga ccattatgag cccaagaatg      420
tgcttttcat ttctggctgt tgctgggacc cttggtgtca gtcactccct gttccaactg      480
gcatttcttg ttaatttacc cttctgtggc cctaagtgtt tggacagctt ctactgtgac      540
cttctcagc ttctcagact agcctgtacc gacacctaca gattgcagtt catggctact      600
gttaacagtg ggtttatctg tgtgggtact ttcttcatc ttctaattct ctacatcttc      660
atcctgttta ctgtttggaa acattcctca ggtggttcat ccaaggccct ttccactctt      720
tcagctcaca gcacagcggc ctttttgttc tttggtccac ccattgttgt gtatacatgg      780
ccacacccta attcacagat ggacaagttt ctggctattt ttgatgcagt tctactcct      840
tttctgaatc cagttgtcta tacattcagg aataaggaga tgaaggcagc aataaagaga      900
gtatgcaaac agctagtgat ttacaagaag atctca          936

```

<210> 480

<211> 668

<212> DNA

<213> Unknown (H38g329 nucleotide)

<220>

<223> Synthetic construct

<400> 480

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gtgaggcacc cctgcatg cggaagtaa gagccagccc ctctcccacc cctggctctt      60
aggaacccca tcatgacctc gtgtttctgt ggctttctag ttttgcctt tttttttttt      120

```

```

ttctcagtc tttagacgcc cagctgcaca acttgattgc cttacaaatg acctgcttcc 180
aggatgcgga aattcctagt ttcttctgtg accttctca actcccccatt cttgcatgtt 240
gtgacacctt caccaataac ataatcatgt atttgcctgc tgccatattt gggtttcttc 300
ccatctcggg gaccttttct tcttactata aaattgtttc ctccattctg aggggttcat 360
catcacgtgg gaagtataag gccttctcca cctgtgggtc tcacctgtca gttgtttgct 420
gattttacgg aacaggcttt ggagggtacc tcagttcaga tgtgtcatct tccccgagaa 480
aggctgcagt ggctcagtg atgtacacgg tgatcacctc catgctgaac cccttcatct 540
acagcctgag aaacagggat attaaagggt tcttgccgga gccgcacggc agcaccgtcc 600
aatttcagta tcttcttctc tgttccattc cttttgtagt gtgggttaaa aaaggcagca 660
aggtcaaa 668

```

<210> 481

<211> 840

<212> DNA

<213> Unknown (H38g330 nucleotide)

<220>

<223> Synthetic construct

<400> 481

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atgtacctgg tcacgggtgt gaggaacctg ctcacatccc tggctgtcag ctctgactcc 60
cacctccaca ccccatgtgt cttcttcttc tccaacctgt gctgggctga catcggtttc 120
acctcggcca tggttcccaa gatgattgtg gacatgcagt cgcatagcag agtcatctct 180
tatgcgggct gcctgacaca gatgtctttc tttgtccttt ttgcatgtat agaagacatg 240
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ttggattccc agctgcacag ttggattgtg ttacaattca ctttcttcaa gaatgtggaa 420
atctccaatt ttgtctgtga cccatctcaa cttctcaacc ttgcctgttc tgacagtgtc 480
atcaatagca tattcatata tttagatagt attatgtttg gttttcttcc catttcaggg 540
atccttttgt cttacgctaa caatgtcccc tccattctaa gaatttcac atcagatagg 600
aagtctaaag ccttctccac ctgtggcttc cacttggcag ttgtttgctt attttatgga 660
acaggcattg gcgtgtacct gacttcagct gtgtcaccac cccccaggaa tgggtgtggtg 720
gcatcagtga tgtacgtgtt ggtcaccccc atgtgaacc ctttcatcta cagcctgaga 780
aatagggaca ttcaaagtgc cctgtggagg ctgcgcagca gaacagtcga atctcatgat 840

```

<210> 482

<211> 924

<212> DNA

<213> Unknown (H38g331 nucleotide)

<220>

<223> Synthetic construct

<400> 482

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atggaaacac agaacctcac agtgggtgaca gaattcattc ttcttgggtct gaccaggtct 60
caagatgtct aacttctggt ctttgtgcta gtcttaattt tctaccttat catcctccct 120
ggaaatttcc tcatcatttt caccataaag tcagaccctg ggctcacagc cccctctat 180
ttctttctgg gcaacttggc cttactggat gcatcctact ctttcattgt gggtcccagg 240
atgttgggtg acttctcttc tgagaagaag gtaatctcct atagaagctg catcactcag 300
ctctttttct tgcattttct tggagcggga gagatgttcc tctcgtttgt gatggccttt 360
gaccgtaca tcgccatctg ccggccttta cactattcaa ccatcatgaa cctagagacc 420
tgctatgcat tatcgttggg tctgtggctt gggggcttta tccattccat tgtacaagta 480
gcccttatcc tgcacttgcc tttctgtggc ccaaaccagc tcgataactt cttctgtgat 540
gttcacaggg tcatcaagct ggccctgcacc aatacctttg tgggtggagct tctgatggtc 600
tccaacagtg gcctgtcag cctcctgtgc ttctggggcc ttctggcctc ctatgcagtc 660
atcctctgtc gtataaggga gcaactcctc gaaggaaaga gcaaggctat ttccacatgc 720
accaccata ttatcattat atttctcatg tttggacctg ctattttcat ctacacttgc 780
cccttcagg ctttcccagc tgacaaggta gtttctctt tccatactgt catcttccct 840
ttgatgaacc ctgttattta tacgttctgc aaccaggagg tgaaagcttc catgaggaag 900
ttgttaagtc aacatatgtt ttgc 924

```

<210> 483
 <211> 457
 <212> DNA
 <213> Unknown (H38g332 nucleotide)

<220>
 <223> Synthetic construct

<400> 483
 gggatgagaa aggaacaagc tgtctgtggt agtcatccat gattgagatg atgtgtggac 60
 cctgagtcag actacctggt tcaaatgcag gctctctact ttttacctat ttgatcttgg 120
 cctgtggetc tctacttctt atccatttca tcttggactt gtggcctctc atacctcatc 180
 ttcccttacag tccctccatat gaaatccccc taaagtagga acaaagcttt ggccaactgc 240
 tccctcccatc tttccgtggt ctttacttag gaactgtgtg tttaatatac gtgacacagg 300
 gttttctccca catccctgag cagaaacaag ctgtgtctgt attttgcact gtactcacc 360
 ccatgctaaa cccctcatc tacatcctga gaaacaagga tgtggtgggg ctcttcagaa 420
 agttctggga acacatcaag tctctaaaca gaacaca 457

<210> 484
 <211> 972
 <212> DNA
 <213> Unknown (H38g333 nucleotide)

<220>
 <223> Synthetic construct

<400> 484
 atgtctttct tctttgtaga ctttaagacc atgaacaggt cagcaacaca catcgtgaca 60
 gagtttatct tcttgggatt ccttgggtgc tgggaagattc agattttcct cttctcattg 120
 tttttgggtga tttatgtctt gaccttgcct ggaaatggag ccatcatcta tgcagtgaga 180
 tgcaaccacac tactacacac ccccatgtac tttctgctgg gaaattttgc cttccttgag 240
 atctgggtatg tgtcctccac tattcctaac atgctagtca acattctctc caagaccaag 300
 gccatctcat tttctgggtg cttcctccag ttctatttct ttttttcaact gggaacaact 360
 gaatgtctct tttctggcagt aatggcttat gatcgatacc tggccatctg ccaccactg 420
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 attggattcc ttggataccc aattcccat ttctacatct cccaactccc cttctgtggg 540
 cctaatatca ttgatcactt cctgtgtgac atggacccat tgatggctct atcctgtgcc 600
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 agtatgtata ttcttcgac ctatatcctg ttactaacag ctgtttttca ggtcccttct 720
 gcagctgggc ggagaaaagc cttctctacc tgtgttctc atttgggtgt ggtatctctt 780
 ttctatggga cagtcatggt aatgtatgta agtcctacat atgggatccc aactttattg 840
 cagaagatcc tcacactggt atattcagta acgactctc tttttaatcc tctgatctat 900
 actcttcgta ataaggacat gaaactcgt ctgagaaatg tcctgttttg aatgagaatt 960
 cgtcaaaatt cg 972

<210> 485
 <211> 945
 <212> DNA
 <213> Unknown (H38g334 nucleotide)

<220>
 <223> Synthetic construct

<400> 485
 atggccaaca tcaccaggat ggccaaccac actggaaagt tggatttcat cctcatggga 60
 ctcttcagac gatccaaaca tccagctcta cttagtgtgg tcatctttgt ggttttctctg 120
 aaggcggttg ctggaaatgc tgtcctgata cttctgatac actgtgacgc ccacctccac 180
 agcccatgt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
 actgtgccca agatgtcct ggaccaggtc atgggtgtga ataaggctct agccctgag 300
 tgtgggatgc agatgttct ctatctgaca ctacaggtt cggaattttt ccttctagcc 360
 accatggcct atgaccgcta cgtggccatc tgccatcctc tccgttacct tgtcctcatg 420

aaccataggg	tctgtctttt	cctggcatcg	ggctgctggg	tcctgggctc	agtggatggc	480
ttcatgctca	ctcccatac	catgagcttc	cccttctgca	gatcctggga	gattcatcat	540
ttcttctgtg	aagtccctgc	tgtaacgate	ctgtcctgct	cagacacctc	actctatgag	600
accctcatgt	acctatgctg	tgctctcatg	ctcctcatcc	ctgtgacgat	catttcaagc	660
tcctatttac	tcatectcct	caccgtccac	aggatgaact	cagcagaggg	ccggaaaaag	720
gcctttgcca	cctgctcctc	ccacctgact	gtgggtcatcc	tcttctatgg	ggctgccgtc	780
tacacctaca	tgctccccag	ctcctaccac	acccttgaga	aggacatgat	ggtatctgtc	840
ttctatacca	tcctcactcc	gggtgctgaac	cctttaatct	atagtcttag	gaataaggat	900
gtcatggggg	ctctgaagaa	aatgttaact	gtgagattcg	tcctt		945

<210> 486

<211> 759

<212> DNA

<213> Unknown (H38g335 nucleotide)

<220>

<223> Synthetic construct

<400> 486

agccacctct	ccgtcattga	cacattatac	atctccacca	ttgtgccccaa	gatgctggta	60
gatttatctca	tgggcgaggg	gaccatctct	ttcatcgccct	gcactgctca	gtgctttctc	120
tacatgggct	ttatgggggc	tgaattcttc	ctgctggggc	tcatggccta	tgaccgctac	180
gtggccatct	gcaaccact	gcgtatcct	gtcctcatca	gctggcgggt	ctgctggatg	240
atcctggcca	gctcttggtt	cggtggggt	ttggacagtt	ttctcctcac	ccccattacc	300
atgagtctcc	cgttctgtgc	ctctcaccaa	atcaatcact	ttttctgtga	ggcaccacc	360
atgctgaggg	tggcctgtgg	ggacaaaacc	acctatgaaa	cagtgatgta	tgtgtgctgc	420
gttgcaatgc	tgctgatccc	cttctcggtg	gtgactgcat	cctacaccag	gattctcacc	480
acagtgcac	agatgacatc	ggctgaaggg	aggaagaagg	cctttgccac	ctgctcttca	540
cacatgatgg	tggtgacatt	gttctatggg	gctgccttgt	atacgtatac	gcttccccaa	600
tcttaccaca	ccccaatcaa	agataagggt	ttctctgctt	tttataccat	cctcacaccc	660
ttattaaacc	ctctcatcta	cagtctgagg	aacagggatg	tgatgggtgc	cttgaagaga	720
gttgtggcaa	gatgttaggg	gacatgtggg	gtgatgagg			759

<210> 487

<211> 857

<212> DNA

<213> Unknown (H38g336 nucleotide)

<220>

<223> Synthetic construct

<400> 487

gttttctccc	gcacccgggt	tcgctcaat	tgcaaacgca	tattctggct	aacgccagtc	60
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gtgtcacaga	gcaggcgcat	tagatttttg	ggctgtgaca	ttcaaacggg	atgtgttctc	180
gggcccctgg	gggaactgaa	gcccttctct	ttggttttat	gtcttatgat	cgctatgtag	240
ctatctgtca	ccctttacat	tatectatgc	ttatgagcaa	gaagatctgc	tgctcatggt	300
ttgcatgtgc	atggggccagt	ggttctatca	atgctttcat	acatacattg	tatgtgtttc	360
agcttccatt	ctgtaggtct	cggtcatta	accacttttt	ctgtgaagtt	ccagctctac	420
tatcattggg	gtgtcaggac	acctcccagt	atgagtatac	agtcctcctg	agtggaactta	480
ttatcttgct	actaccatc	ctagccatc	tggcttcccta	tgctcgtgtg	cttattgtgg	540
tattccagat	gagctcagga	aaaggacagg	caaaagctgt	ttccacttgt	tcctcccacc	600
tgattgtggc	aagcctgttc	tatgcaacca	ctctctttac	ctacacaagg	ccacactcct	660
tgcgttcccc	ttcacgggat	aaggcggtgg	cagtatttta	caccattgtc	acacctctac	720
tgaacccatt	tatctacagc	ctgagaaata	aggaagtgac	gggggcagtg	aggagactgt	780
tgggatattg	gatatgctgt	agaaaatatg	acttcagatc	tctgtattga	ttgagcatta	840
acaacataaa	aagctgt					857

<210> 488

<211> 812

<212> DNA

<213> Unknown (H38g337 nucleotide)

<220>

<223> Synthetic construct

<400> 488

agaagggaca	ttttctat	tttgccttcatt	tgtagctatt	catgactgac	tctccgttct	60
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ttcaacagt	atttactgaa	ttccttacta	tgactcttct	atatttgaca	tgccacacga	180
tggttcagcaa	tgacttctac	tcaagagcta	gttttttagt	tcacactgct	tttctcttgt	240
tctttatctt	ttgtctttgt	agctcagaac	agaaaaatct	atagaaaaga	tcttgctacc	300
aggctatggg	accctcttgt	ccatggcgat	atcttactgt	ctttgtgtct	ttgggctgag	360
caatcctgca	gcatgggtga	tgctcaataa	tgctcatgga	acaaaatggg	gtgggttcctc	420
ttccaggaag	tgctgccatc	tctcttttga	ttgagaatag	gtttacctag	gtgattacat	480
cactaacatt	gtattcctgt	gatttcttcc	tcatgatagg	acagatttta	ctaaaaagtc	540
aaaaattatt	tattacatta	tgccgttcc	cttacttttc	atgccagatt	aaattttctt	600
ggtccttcaa	tgccacttc	taatatcaat	aaacaagtaa	cctttcccca	acctactgaa	660
gtcgccatgt	ggaattgggc	attctttctg	ttgatcccat	atcatccct	tcattcttct	720
gtctgcccgt	ttgtccatcc	atctatccat	ccacttagct	attcggtcgt	tcaacaatga	780
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<210> 489

<211> 931

<212> DNA

<213> Unknown (H38g338 nucleotide)

<220>

<223> Synthetic construct

<400> 489

atgtcattag	ctgaaggaaa	tcagagttct	ggagccgtat	ttaccctctt	gggcttctca	60
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gtattgggaa	acctgggcat	gatcatgac	atcaggatca	accccaaact	ccacaccgc	180
atgtactttt	tcctcagcca	cttgctcttt	gttgatttct	gttattccac	cacagttaca	240
cccaaactgc	tgaggaaact	ggttgtggaa	gacagaacca	tctccttcac	aggatgcac	300
atgcaattct	tcctggcggt	tatatgtgca	gtggcagaaa	cattcatgct	ggcagtgatg	360
gcctatgatt	gatacgtggc	gggtgtgtaac	cctttgtctc	acacagttgt	caggctccag	420
aaactctgtg	catcattagt	ggcagggccc	tacacatggg	gtataatctc	ttctctgaca	480
ctcacctatt	tcctcttgtc	attatccttc	tggtgggtcta	acatcatcaa	taattttgtc	540
tgtgagcaat	ctgtcatcat	ctctgtctcc	tgctctgacc	cctacatcag	ccaaatgctt	600
tgttttgtca	ttgcaatatt	caatgaggtg	agcagcttgg	gagtcacct	cactacctat	660
atcttcatct	ttattgctgt	cataaaaatg	ccttctgctg	ttgggcacca	aaaagctttc	720
tctacctgtg	cttcccacct	gactgccatc	actatcttcc	acgggactgt	cctgttcctt	780
tattgtgtac	ccaactccaa	aaactcatgg	ctcatagtca	aagtaggttc	tgtgttttat	840
acagtcacat	tcaccacgtt	gaacccttta	acctacagcc	tcaggaacaa	agacgtgaaa	900
gagagtgttc	gaaagttaat	gaatcactca	aa			931

<210> 490

<211> 651

<212> DNA

<213> Unknown (H38g339 nucleotide)

<220>

<223> Synthetic construct

<400> 490

ttcttggtcc	tttttgcagt	tatagaagac	atgttcctga	ctgtgatggc	ctatgactgc	60
tttatagcca	tctgtcatcc	tctgcactac	ccagtcacgt	tgaatcctca	cctctgtgtc	120
ttcttcattt	tggtgtcctt	tttctttage	ctgttggtat	cccagctgca	tagctggatt	180
gtgttacaat	tcaccatcat	caagaatgtg	gaagtctcta	atcttctctg	tgaccctctt	240
caacttctca	aacttgccgt	ttctgacagc	gtcatcaata	gcattattcat	atatttcgat	300

```

aatactatgt ttggttttct tcccatttca gggatccttt ggtcttacta taaaatcgtc 360
ccctacattc tcaggatttc atcgtcagat gggaagtata aagccttcgc cacctgtggc 420
tctcacctgg cagttgcttg ctgattttat ggaacaggca ttggcatgta cctgacttca 480
gctgtgtcac cccccccag gaatgggtgtg gtggcatcag tgatgtacgc tgtggtcacc 540
cccatgctga acctttttat ctacagcctg agaaacaggg acatacaaag tggcctgcgg 600
aggctgcgcc ccagaacagt cgaatctcat gatctgttcc atcctttttc t 651

```

<210> 491

<211> 933

<212> DNA

<213> Unknown (H38g340 nucleotide)

<220>

<223> Synthetic construct

<400> 491

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atgggcaagg aaaactgcac cactgtggct gagttcattc tccttggact atcagatgtc 60
cctgagttga gagtctgcct cttcctgctg ttctttctca tctatggagt cacgttggtta 120
gccaatctgg gcatgactgc actgattcag gtcagctctc ggctccacac ccccggtgac 180
tttttctca gccacttgct cttttagat ttctgtact cctcaataat tgtgccaaag 240
atgttggcta atatctttaa caaggacaaa gccatctcct tcctagggtg catggtgcaa 300
ttctacttgt tttgcacatg tggagtcact gaggtcttcc tgctggccgt gatggcctat 360
gaccgctttg tggccatctg taacccctg ctgtacatgg tgaccatgtc tcagaagctg 420
cgtgtggagc tgacctcttg ctgtacttcc tgtgggacgg tgtgttctct gattcactcg 480
tccttagctc ttaggatacct cttctataga tctaattgta ttaaccactt cttctgtgat 540
ctacccctc tcctaagtct tgettgctct gatgtcactg tgaatgagac actgctgttc 600
ctgggtggcca ctttgaatga gagtgttacc atcatgatca tcctcacctc ctacctgcta 660
attctacca ctatcctgaa gatacactct gcagagagca ggcacaaagc tttctccacc 720
tgtgcctccc acctcacagc catcactgtc tcccatggaa caatccttta catttattgc 780
aggccagatt caggcaacag tggagatgtt gacaaagtgg ccaccgtgtt ctacacagtt 840
gtgattccca tgctgaaccc cctgatctac agcctgagaa ataaggatgt gaacaaagct 900
ctcagaaaag tgatgggctc caaaattcac tcc 933

```

<210> 492

<211> 963

<212> DNA

<213> Unknown (H38g341 nucleotide)

<220>

<223> Synthetic construct

<400> 492

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atgtttctga cagagagaaa tacgacatct gaggccacat tcactctctt gggtttctca 60
gattacctgg aactgcaaat tcccctcttc tttgtatttc tggcagtcta cggcttcagt 120
gtggtaggga atcttgggat gatagtgatc atcaaaatta acccaaaatt gcataccccc 180
atgtattttt tectcaacca cctctccttt gtggatttct gctattcctc catcattgct 240
cccatgatgc tgggtgaacct ggtttagaaa gatagaacca tttcattctc aggatgtttg 300
gtgcaattct ttttcttttg cacccttgta gtgactgaat taattctatt tgcggtgatg 360
gcctatgacc actttgtggc catttgcaat cctctgctct acacagttgc catctcccag 420
aaactctgtg ccatgctggg ggttgtattg tatgcatggg gagtcgcatg ttccctgaca 480
ctcgcgtgct ctgctttaaa gttatctttt catgggttca acacaatcaa tcatttcttc 540
tgtgagttat cctccctgat atcactctct taccctgact cttatctcag ccagttgctt 600
cttttactg ttgccacttt taatgagata agcacactac tcatcattct gacatcttat 660
gcattcatca ttgtcaccac ctggaagatg ccttcagcca gtgggcaccg caaagtcttc 720
tccacctgtg cctcccacct gactgccatc accatcttcc atggcaccat cctcttcttc 780
tactgtgtac ccaactccaa aaactccagg cacacagtca aagtggcttc tgtgttttac 840
accgtggtga tccccttggt gaatcccctg atctacagtc tgagaaataa agatgttaag 900
gatgcaatcc gaaaaataat caatacaaaa tattttcata ttaaacaatag gcattgggtat 960
cca 963

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<210> 493

<211> 303
 <212> DNA
 <213> Unknown (H38g342 nucleotide)

<220>
 <223> Synthetic construct

<400> 493
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 attgctttga ttttcaattt tctctttgtt tttggcctcc agagtccctt tattttctta 120
 aaggcatgac agtgctttcc aaaggatata cactatattt tcgttaaggc gagaagggct 180
 tcaggttatc taacctacca tattgctgga aatagaagtt aaaccgtttt tttcctagtc 240
 tgtaactgcc actattatgg tgatgatata ggctaagtc gaatatttta tgtgaacata 300
 tta 303

<210> 494
 <211> 957
 <212> DNA
 <213> Unknown (H38g343 nucleotide)

<220>
 <223> Synthetic construct

<400> 494
 atgcctgtgg ggaaacttgt cttcaaccag tctgagccca ctgagtttgt gttccgtgcg 60
 ttcaccacag ccactgaatt ccaggttctt ctcttccttc tcttcctcct cctctacttg 120
 atgacccctt gtggcaacac agccatcctc tgggtgggtg gcacacacag caccctccgc 180
 accccgatgt atttcttctt gtccaacctg tcttctctgg aactctgcta caccaccgtg 240
 gtagtacctt tgatgctttc caacattttg gggggccaga agcccatctt gttggctgga 300
 tgtggggccc aaatgttctt ctttgtcacc ctccgcagca cggactgttt cctcttggcg 360
 atccctggcct atgaccgcta tgtggctatc tgccaccgc tgcaactacac cctcatcatg 420
 acccgcgagc tgtgcacgca gatgctgggt gggggccctg gcctggccct cttccctcc 480
 ctgcagctca ccgccttaat cttcaccctg cctttttgcg gccaccacca ggaaatcaac 540
 cacttctctt gcgatgtgcc tcccgctctg cgcctggcct gcgctgacat ccgctgacac 600
 caggetgtcc tctatgtcgt gagcatcctc gtgctgacca tcccttctct gctcatctgc 660
 gtctctacag tgttcatcac ctgtgccatc ctgagcatcc gttctgccga gggccgccc 720
 cgggccttct ccacctgctc cttccacctc accgtggctc tgctgcagta tggctgtgc 780
 agcctcgtgt acctgcgtcc tccgtccagc acctcagagg atgaggacag ccaaatcgcg 840
 ttggtctaca cctttgtcac ccccttactc aaccctttgc ttacagcct taggaacaag 900
 gatgtcaaa gtgctctgag gaggccatt atccgtaaag cagcctctga cgccaac 957

<210> 495
 <211> 624
 <212> DNA
 <213> Unknown (H38g344 nucleotide)

<220>
 <223> Synthetic construct

<400> 495
 atggagctgg agaatggcac tgtgaagact ggggtcttct tcttgggatt cagcgaccat 60
 ctggaacttc agagtctcct ttttgcagaa tttttttcca tctactctgt tactctgatg 120
 gggaaccttg gaatgatttt attaatcaca atcagttccc acttgacac tcctatgtac 180
 ttttctctct gtgtgttgtc cttcatagat gcatgctact cttctgtcat tgctcccaaa 240
 ttacttgtga acttgggttc tgaaaagaag accatttctt acaatggctg tgttgacag 300
 ttatatttct tctgtctctt agttgacaca gaatctttcc tcttggctgc catggcttaa 360
 gaccggtaca tagcaatctg taaccgctg ctctatacag tgattatgtc caagaaggtt 420
 tgttgccagc ttgcaattgg agcatttttg gggggcacta tgagctcaat tattcatacc 480
 acgaacactt tccatctgtc attctgtctc agagatatta accatttctt ttgtgatata 540
 tccccactct tctctctgtc ctgcactgac acatacatgc atgacatcat tctggtggctc 600
 tttgccagtt ttgtggaagc aatc 624

<210> 496
 <211> 963
 <212> DNA
 <213> Unknown (H38g345 nucleotide)

<220>
 <223> Synthetic construct

<400> 496
 cacacagagc cacggaatct cacaggtgtc tcagaattcc tctctctggg actctcagag 60
 gatccagaac tgcagcctgt cctccctggg ctgtccctgt ccatgtatct gctcacgggtg 120
 ctgaggaacc tgctcatcat cctggctgtc agctctgact cccacctcca ccccccatg 180
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 aagatgattg tggacatgca gtgcgatagc agtcattctt tatgcaagct gcctgacaca 300
 gatgtctttc tttgcccttt ttgcatgcat agaagatcat gctcctgatt gtgatggcct 360
 atgaccgatt tgtagccgtc tgtcactccc cacactaccc agtcattcat aatcctcgcc 420
 tcggtgtctt cttcgttttg gtgtcctttt tccttagcct gttggattcc cagctgcaca 480
 gttggactgt gttacaattc accttcttca agaattgtga aatctctaatt tttgtctgtg 540
 acccatctca acttctcaac cttgcctgtt ctgacagcgt catcgatagc atattcatat 600
 atttagatag tactatgttt cgttttcttc cgatttcagg gatccttttg tcttactcta 660
 acattgtccc ctccattcta agaatttcat catcagatgg gaagtctaaa gccttctcca 720
 cctgtcgtc tcacctggca gttgtttgct tattttatgg aacaggcatt ggcgtgtacc 780
 tgacttcagc tgtggcacca cccccaggag tgggtgtgtg gtgtcagtga tgtacactgt 840
 ggtcaccccc atgctgaacc ctttcatcta ctgcctgaga aacagggaca ttcaaagcgc 900
 cctgtggagg ctgcgcagca gaacagtcga atctcatgat ctgttccatc ctttttcttg 960
 tgt 963

<210> 497
 <211> 932
 <212> DNA
 <213> Unknown (H38g346 nucleotide)

<220>
 <223> Synthetic construct

<400> 497
 gaaaagaatc tcattctctat gaatgggttt atgaacttca ctgattaccc agagtgggaa 60
 atgcccttgt tcttagtggt tctcagttgc ttcctggcca ttattttgag aaatatggaa 120
 tgggtcattc tgacccaagt gaatgtgcat ctcttcaccc tatatacttc ttcctaacaa 180
 atgtcaccc tttgggatacc tcagtcattca tgcctcagat cctggccatt ctggccacag 240
 gcaagacaac catttccat ggccgctaatt aaaagcaatg aggtcctttt tcttcatttg 300
 tgtaggaact tagtggttcc tgccaacagc aatgaccata agcagccac tgccccacac 360
 tacaagccat gaacttcaag acatgttggg gttttttttt ggtggggatt tgttgttgta 420
 catgctgggt tttgatgggt aacgtgggtga atgcctacac ctgaggacta tcaggagcca 480
 ctttcaacac catctgcaca tttgcccgtc tcttctgtga tgacaattag atcaaattct 540
 gtcacatcct gcccctgctg aagctcattt gaaatacttc aggaacacgc aagataatta 600
 ttgtgatctt tgacagcttt tatgattata gctggcacta gggtcattct gatctcttac 660
 ctgctaatac tcagggtctt gaggatgaaa tcacgcagtg gcaaagccaa taattttatc 720
 catccacttg tgccctccac ctaactgcta tgaccttcc tttgggatccc catcttcaga 780
 catgtgaagt acctcagata aatcactgac agaagacaag ttggcatcat gacttgcacc 840
 atctttatct ctatgctaga acttttgatc caaagtctaa agaaggatat acaagttgcc 900
 ttcaaaaagg ccataggtaa cttctgggtt tt 963

<210> 498
 <211> 1005
 <212> DNA
 <213> Unknown (H38g347 nucleotide)

<220>
 <223> Synthetic construct

<400> 498

tctacagacc	cacagaatct	aacagatgtc	tctatatctc	tectccgaga	acctcagagg	60
atccagaatg	gcagctgggc	cttgctgggt	tgttcctgtc	catgtgcctg	gtaacgggtg	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acttcttcct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acggtagcca	240
agatgattgt	ggacatccaa	tctcacagca	gagtcattct	ctatgcaggc	tgcttgactc	300
agatgtctcc	ctttgccatt	tttggagtca	tggaagagag	acacgtcctt	gagtgtgatg	360
gcctctgacc	gctttgtagc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgttctctgtg	gctttctagt	tttggtgtct	tttttttttt	tttctgtctt	ttagatgccc	480
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cttactataa	aattgtttcc	tccattctga	gggtttcatc	atcaggtggg	aagtattagg	720
ccttctcttc	ctgttggtct	cacctgtcag	ttgtttgctg	attttatgga	acaggcgttg	780
gaggtacctc	agttgagatg	tgatcatctc	cccgaggaag	gttgacgtgg	cctcagtgat	840
gtacatgggtg	gtcaccctca	tgtgaaccc	ctttgtctac	agcctgagaa	acagggatat	900
taaaagtgtc	ctgcggtggc	cgcacggcag	cacggtctaa	tctcaatata	ttcttatctg	960
ttccattcct	tttgtagtgt	aggttaaaaa	ggcagcaagg	tcaaa		1005

<210> 499

<211> 975

<212> DNA

<213> Unknown (H38g348 nucleotide)

<220>

<223> Synthetic construct

<400> 499

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accatcactg	aattcattct	cctgggattt	ttcaagcagg	atgagcatca	aaacctcctc	120
ttttgtcctt	tcttggttat	gtacctgggc	actgtgattg	ggaacgggct	catcattgtg	180
gctatcagct	tggtacgta	ccttcatacc	cccatgtatc	tcttccctgc	caatctatcc	240
tttgctgata	tttccctccat	ttccaactca	gtccccaaaa	tgctggtgaa	tattcaaacc	300
aagagtcaat	ccatctctta	tgagagctgc	atcacacaga	tgtacttttc	tattgtgttt	360
gtcgtcattg	acaatttgct	cctggggacc	atggcctatg	accactttgt	ggcgatctgc	420
cacctctga	attatacaat	tctcatgctg	cccaggttcg	gcattttgct	cacagtcac	480
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tctgtttcag	atacattgat	caatgagctt	gtgttggtta	ttgtgggttt	atcagttatc	660
atcttccctt	ttacactcag	cttcttttcc	tatgtctgca	tcacagagc	tgctcctgaga	720
gtatcttcca	cacagggaaa	gtggaaagcc	ttctccactt	gtggctctca	cctgacagtt	780
gtattactgt	tctacggaac	cattgtaggc	gtgtactttt	tccccctctc	cactcacctt	840
gaggacactg	ataagattgg	tgctgtccta	ttcactgtgg	tgacacccat	gataaacccc	900
ttcatctaca	gcttgaggaa	taaggatatg	aaaggtgcc	tgagaaagct	catcaataga	960
aaaatttctt	ccctt					975

<210> 500

<211> 768

<212> DNA

<213> Unknown (H38g349 nucleotide)

<220>

<223> Synthetic construct

<400> 500

atgtactttt	tctcagtc	tctatccttt	ttggatactt	gttattccaa	tgtattttaca	60
cccaaactgt	tagagatttt	ggttgtggaa	gacagaacta	tctccttcaa	aggatgcatg	120
gtacaatttt	tcttttggtg	tgcatattgta	atcacagaaa	tgttcatgtt	agcgggtgatg	180
gcttatgact	tgtttatggc	tgtttgtaac	ccccgtctct	acacagtggc	tatgtctcct	240
aagctctgtg	ctctcctggt	agctggaact	tacacatggg	gtggactctg	ttccctgaca	300

ctcacttatt	ctcttttggg	gttatcctac	tgtggatcta	acatcataaa	tcactttggc	360
tgtgagtact	ctgccattct	ttctctatcc	tgtctctgac	cctacttcaa	ccagatggcg	420
tgttttagtca	ttcttatatt	cagtgaagct	tgtagcctcc	tggccatcct	tgccttctat	480
gtcttcatag	ttgccactgt	catcaagatg	ctttctacgg	gtggacccca	aaaggccatc	540
tccacctgtg	cctcccacct	gaccaccgtc	tccattttcc	atgggggtcat	cctgctcctt	600
tactgtgtgc	ccaactccaa	aagctcatgg	ctcctgggtca	aagtggctac	tgtacttttt	660
acagtcataa	tccctatgct	gaatcccctg	atctacagcc	ttaggaacaa	agatgtaaaa	720
gggaccgtca	ggaagttgat	aaactcccaa	tcaccttttc	actcaaaa		768

<210> 501

<211> 951

<212> DNA

<213> Unknown (H38g350 nucleotide)

<220>

<223> Synthetic construct

<400> 501

atggcagaga	gtggcaccac	ggtgacagaa	ttttttctga	gggggttccg	gttgaaggca	60
gagctgcaga	taggtctctt	ctttgtgttt	ctggtcattt	ttctcatcac	catggggggc	120
aacctgggca	tgattgtgct	aatttaattc	agactgaccc	tcggctccag	actcccatgt	180
actttctcct	cagtcactct	tccttctctg	acatttgcta	ctcttctggt	attggtcctc	240
agttgcttga	gactttggga	ctgataagat	gatcatcacc	tatgagcgct	gtgccagcca	300
attcttcttt	ttcacactct	gtgctagcat	tgagtgtttc	cttttggctg	tgatggctta	360
tgaccggtac	gtggctgtgt	gtaacccctt	cctctatgcc	atagtcatga	caccaaagac	420
ccgcctggcg	ctgctggccg	gggcatattc	tggtgccata	gtcaattctg	tgatctgcac	480
tggtctgcacc	ttctctatct	ccttctctaa	gtccaaccat	gtagacttct	ttttctgtga	540
cctcccaccc	ctgctgaagc	ttgcctgtag	tgaaccagg	ccacgggaat	gggtaatcta	600
cctctcagct	tttctgggtca	tcacaaccag	catttcagtg	attcttacat	cgtacttggt	660
catcattcag	tctgttctga	agattcgtac	agcaggtgga	aagccaagac	cttctccacc	720
tgtgcttctc	acatgactgc	attgactctc	ttctttggaa	cactcatatt	catatacctg	780
aaaggcaaca	tgggcgaatc	ccttgaggaa	gacaagatcg	tgtcaatatt	ttacactgtg	840
gtcatcccca	tgctaaatcc	aatgatctac	agcctgagaa	acaaagacat	gaaagaggct	900
ctgaagaaag	ttttcaacag	gataagggtt	tccaagcag	agtaactctt	g	951

<210> 502

<211> 939

<212> DNA

<213> Unknown (H38g351 nucleotide)

<220>

<223> Synthetic construct

<400> 502

atgctgctga	cagatagaaa	tacaagtggg	accacgttca	ccctcttggg	cttctcagat	60
taccagaac	tgcaagtccc	actcttctctg	gtttttctgg	ccatctacaa	tgtcactgtg	120
ctaggggaata	ttgggttgat	tgtgatcatc	aaaatcaacc	ccaaactgca	tacccccatg	180
tactttttcc	tcagccaact	ctcctttgtg	gatttctgct	attcctccat	cattgctccc	240
aagatgttgg	tgaaccttgt	tgtcaaagac	agaaccattt	catttttagg	atgcgtagta	300
caattctttt	tcttctgtac	ctttgtggte	actgaatcct	ttttattagc	tgtgatggcc	360
tatgaccgct	tcgtggccat	ttgcaaccct	ctgctctaca	cagttgacat	gtcccagaaa	420
ctctgcgtgc	tgttgggtgt	gggatccctat	gcctggggag	tctcatgttc	cttgggaactg	480
acgtgctctg	ctttaaagtt	atgttttcat	ggtttcaaca	caatcaatca	cttcttctgt	540
gagttctcct	cactactctc	cctttcttgc	tctgatactt	acatcaacca	gtggctgcta	600
ttctttcttg	ccacctttta	tgaatcagc	acactactca	tcgttctcac	atcttatgcg	660
ttcattgttg	taaccatcct	caagatgcgt	tcagtcagtg	ggcgccgcaa	agccttctcc	720
acctgtgcct	cccacctgac	tgccatcacc	atcttccatg	gcaccatcct	cttctcttac	780
tgtgtgcccc	actccaaaaa	ctccaggcac	acagtcaaa	tggcctctgt	gttttacacc	840
gtggtgatcc	ccatgttgaa	tcccctgac	tacagtctga	gaaataaaga	tgtcaaggat	900
acagtcaccg	agatactgga	caccaaagtc	ttctcttac			939

<210> 503
 <211> 932
 <212> DNA
 <213> Unknown (H38g352 nucleotide)

<220>
 <223> Synthetic construct

<400> 503
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 ctccagtggg gggttcctct ctctctcata tttttgagtt tctatcttgc cactatgtta 120
 gggaaacacag gcatgatcct cctgatccgt ggcgatcgtc ggctccacac cccgatgtac 180
 ttcttcctca gccaccttct cttgggtggac atctgctact cgtccgccat catccctcag 240
 atgctggctg tgctgtggga gcacggcaca accatctccc aggtctgctg tgcagctcag 300
 ttcttctctt tcaccttctt tgcttccatc gactgctacc ttctggccat catgcctatg 360
 accgtacacg ggccgtgtgc agccctgct ttatgtcacc atcataaccg agaaggaccg 420
 ctgggcctag tcaactgggc ttacgttgct ggttttttca gtgccttgt tgcacggta 480
 cagccttcac tctctcttct tgtggaaaca atgagatcaa cttcattttc tgtgacctcc 540
 ctctcttatt aaaactctcc tgtggggaca gctacactca ggaagtgggt attattgtgt 600
 ttgctctttt cgtcatgcct gcctgtatct tgggtgatct ggtatcctac ctgtttatca 660
 ttgtggccat cctgcagatc cactctgctg gagggccggc caagaccttc tccacctgag 720
 cctccacact cactgccgtc gctcttttct ttggcaccct catcttcatg tacctgcgag 780
 acaacacagg ccagtcctcc gagggagacc gagtgggtgc tgtgctctac acggtgggtga 840
 ccccaatgct gaatcccctt atctatagcc tgagaaacaa ggaggtaaaa gagggcacta 900
 ggaaagccct gagcaaatca aagcctgcta ga 932

<210> 504
 <211> 762
 <212> DNA
 <213> Unknown (H38g353 nucleotide)

<220>
 <223> Synthetic construct

<400> 504
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 gtcaccatgc tgagtatatt ctggttcaat gtgagggaaa tcagctttaa tgccctgttg 120
 tcccacatgt tctttattaa attcttcact gtcattggaat cctcagtgtc gttggccatg 180
 gcttttgatc gttttgtggc cgtctctaata ccccttaggt atgccatgat ttttaactgac 240
 tccagaatag ctcaaattgg agtggcaagt gtcacagagg ggctcctaata gctgacacca 300
 atggtagcac ttcttataag actttcctac tgccacagcc aagtactcca ccactcctac 360
 tgctaccacc ctgatgtgat gaagctctca tgcacagaca ccagaatcaa cagtgcagtt 420
 gggctgactg ccatgttctc tactgttggg gtagacttac ttctcactct cctttcttat 480
 gttttgatca ttaggactgt ccttagcggt gcttccccag aagagaggaa ggaaaccttc 540
 agtacatgtg tctcccacat tgtggctttt gctatatatt acattccatt gatcagctcg 600
 tccattgttc acagatttgg gaaacaagcc ccagcctatg tacatactat gattgetaac 660
 acctacctgc tgatctcccc tttgatgaac cctgtcatct acagtgtgaa aaccaaacag 720
 atacgtagag ctgtgataaa aattctccat tccaaagaaa ca 762

<210> 505
 <211> 565
 <212> DNA
 <213> Unknown (H38g354 nucleotide)

<220>
 <223> Synthetic construct

<400> 505
 atggactggg aaaattgctc ctcatctaact gatttttttc tcttggaat taccaataac 60
 ccagagatga aagtgacctc atttgctgta ttcttggtc tttatatcat taatttctca 120
 gcaaatcttg gaatgatagt tttaatcaga atggattacc aacttcacac accaatgtat 180

ttcttctctca	gtcatctgtc	tttctgtgat	ctctgctatt	ctactgcaac	tgggccaag	240
atgctggtag	atctacttgc	caagaacaag	tcaataccct	tctatggctg	tgctctgcaa	300
ttcttggctc	tctgtatctt	tgcatattct	gagtgcttac	tgctgtcagt	gatggccttt	360
gatcggtaca	aggccatcat	caacccctg	ctctatacag	tcaacatgtc	tagcagagtg	420
tgctatctac	tcttgactgg	ggtttatctg	gtgggaatag	cagatgcttt	gatacatatg	480
acactggcct	tccgcctatg	cttctgtggg	tctaatagaga	ttaatcattt	cttctgtgat	540
atccccctct	ctcttattac	tctct				565

<210> 506

<211> 978

<212> DNA

<213> Unknown (H38g355 nucleotide)

<220>

<223> Synthetic construct

<400> 506

ctcaatttca	ttatcttctt	caggtgaacc	agctatatattg	agcctatggc	caaaagaaat	60
ctcagcactg	tgacagagtt	cattcttcta	gtcttcacag	atcacccctga	actggcagtt	120
ccactcttcc	tagtgtttct	cagtttctat	cttgctactt	ttctggggaa	tgggggggatg	180
atcattctaa	tccaagtgga	tgcccaactc	cacacccccg	tgtacttctt	cctgagccac	240
cttgctttcc	tggatgcctg	ctgtgcctca	gtaatcaccc	ctcagattct	ggccacactg	300
gccacagaca	agacagttat	ctcctatggc	tgccgtgctg	tgacgttctc	tttcttcacc	360
atatgtgcag	gcacagagt	ttacctgtg	tcagtgtatg	cctatgaccg	ctttgttgcc	420
attagcaatc	cactgcactg	taacatgacc	atgactccag	gtacctgcag	ggctcttttg	480
gccagtgcct	tcactctgtg	ggtgtcaggg	gccattctgc	ataccacgtg	caccttcacc	540
ctctccttct	gttggtgaca	tcagatcaac	ttcttcttct	gtgacctccc	acctctgctg	600
aagctcgcct	gcagcagcat	gacacaaact	gagattgtca	ttctcctttg	tgcaaaatgc	660
atgttcctag	ccaatgtcat	ggttatcctg	atctgtctaca	tgctcattat	cagagccatt	720
ttgaggggtga	agtcgggcagg	tgggtaagcc	aagaccttct	ccacctgcac	ctccccctc	780
accactgttg	tcctcttctt	tgggacactt	gccttcatgt	accagagaag	taactccgcc	840
aaatcctcag	aggaagacaa	gatatgtgtc	gtctttttaca	ctgtaatcat	ccctatgttg	900
aacccttgta	tctacagtct	gaggaacaaa	gatgtaaaag	ctgcatttgg	aaaactcggt	960
ggtaaattcc	aatttcca					978

<210> 507

<211> 983

<212> DNA

<213> Unknown (H38g356 nucleotide)

<220>

<223> Synthetic construct

<400> 507

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attggcatcc	cagggctgga	ggcggttcat	ggctggctcg	ccatccctt	ctcctccatg	120
tacactgtgg	ccctccctgg	gaactgcctg	atcctcctgg	ctgtgaagag	gaaccccagc	180
ctgcaccagc	ccatgtgcta	cttctgttcc	atgctggcgc	tccccaagc	gggcctcacc	240
ttgtccacac	tgcccatcac	cttggtctgt	ctctggtttg	accaccggct	catgggcttc	300
aatgcctgcc	tgggtccagat	gttcttctct	cactcctctg	tgggtggagtc	ctcagtgtc	360
ctggccatat	cctttgacca	ctttgtggcc	atctccaacc	cctgcacta	tgacagtgtc	420
ctcacaaata	gtgtcatcat	caggattggg	ctggccattg	tggctcaagt	tacctgtg	480
ctcttctctg	gccatttccg	gttaagagtc	taaatttctg	ccctgggtgat	aacatcccat	540
cccactcggt	ctgtttccac	cctgatgtaa	tgaggcgggc	ctgtgctggac	atcacgatca	600
atatatgcta	tgggggtctac	gtgggttgtt	ctacaggggg	cttagactcg	ctgctcatct	660
ttctgtccta	taccttcata	ctgcacacag	tcatgggtct	ggctgtctcc	agggagcgca	720
tctgggccc	caacacctgc	gtttccca	ttccggctgt	ctttgtcttc	ttatttcag	780
gtatcacctg	gtccatgatc	caccattttg	ggaggcacct	gccccacatt	gtacatgtc	840
ttgtttacct	tgtgtacctg	gtgatgcctt	ctgtgctcca	ccccatcatt	tacagtatga	900
agtccaagcc	catcagggag	gccatcctca	ggatgctgat	ggggagaagc	caaggctgat	960
gaaattacaa	aatattatag	ggt				983

<210> 508
 <211> 933
 <212> DNA
 <213> Unknown (H38g357 nucleotide)

<220>
 <223> Synthetic construct

<400> 508
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 cctgagttga gagtctgcct cttcctgctg ttccttctca tctatggagt cacgttggtta 120
 gccaacctgg gcatgattgc actgattcag gtcagctctc ggctccacac ccccatgtac 180
 tttttcctca gccacttgct ctctgtagat ttctgctact cctcaataat tgtgccaaaa 240
 atgttggcta atatctttaa caaggacaaa gccatctcct tcctaggggtg catgggtgcaa 300
 ttctacttgt tttgcacttg tgtggtcact gaggtcttcc tgctggccgt gatggcctat 360
 gaccgctttg tggccatctg taaccctttg ctatacacag tcaccatgtc ttggaagggtg 420
 cgtgtggagc tggcttcttg ctgctacttc tgtgggacgg tgtgttctct gattcatttg 480
 tgcttagctc ttaggatccc cttctataga tctaagtga ttaaccactt tttctgtgat 540
 ctacctcctg tcttaagtct tgcttgctct gatatactg tgaatgagac actgctgttc 600
 ctgggtggcca ctttgaatga gagtgttacc atcatgatca tcctcacctc ctacctgcta 660
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 tgtgcttccc acctcacagc tatcactgtc ttccatggaa cagtcctttc catttattgc 780
 aggcccagtt caggcaatag tggagatgct gacaaagtgg ccaccgtgtt ctacacagtc 840
 gtgattccta tgctgaactc tgtgatctac agcctgagaa ataaagatgt gaaagaagct 900
 ctcaaaaaag tgatgggctc caaaattcac tcc 933

<210> 509
 <211> 621
 <212> DNA
 <213> Unknown (H38g358 nucleotide)

<220>
 <223> Synthetic construct

<400> 509
 cccctctgc gatgggggtc ctaagagcca gcggaggaag aggggctggc tctcagttcc 60
 cgcctttttt ttttttctca gtgttttaga cgcccagctg cacaacttga ttgccttaca 120
 aatgacctgc ttccaggatg cggaaattcc taatttcttc tgtgacctt ctcaactccc 180
 ccatacttga tgttgtgaca ccttcaccaa taacataatc atgtatttcc ctgctgtcat 240
 atttggtttt cttcccatct ctgggaccct tttctcttac tataaaattg tttcctccat 300
 tctgagtgtt tcatcatcac gtgggcagta taaggccttc tccacctgtg ggtctcacct 360
 gtcagttgtt tgctgatttt acggaacggg cggttgaggga tacttcagtt cagatgtgtc 420
 atcttccccg agaaaggctg cagtggcctc agtgatgtac acggtgatca ccccatgctg 480
 aacccttca tctacagcct gagaaacagg catattaaaa gtgtcctgcg gcggccgcac 540
 agcagaccg tccaatctcc gtgtcttctt aactgttcca ttcttttgt agtgtgggtt 600
 aacaaaggca gcaagggtcaa a 621

<210> 510
 <211> 633
 <212> DNA
 <213> Unknown (H38g359 nucleotide)

<220>
 <223> Synthetic construct

<400> 510
 atttgactga aattgatctt tggaaatcct agatagtaat agattttcag atgtgtctat 60
 gattattttg tgggactgtc aacccttgct ttatgacacc atcacaactc tcaagatgtc 120
 tggcagaagc tgggtgactgc atattgtaga gggtttgaca aatgtaatcc aatgtatata 180
 cttcacctgc tcaactcctt tttgtgcctt catctatagg ttctactctc tgtgacctcc 240

attgctgctg	accctgaatt	gggtgatagc	tccctccagc	agctgctgat	ttttcacttt	300
gctctgtata	tgattctgac	cagactagtt	ttgatcctgt	tctctgactt	gttcatcagc	360
aaggccatct	aaacacctgc	aaatcaggtc	tctaggcaaa	gattcctcaa	cctttttcta	420
cctttgcctc	atgcagaact	gcagttcggg	tgattgttga	gactacagct	ttgatctatg	480
tgtgcagcag	taggcaagtc	ccttacaggg	gagaggccg	tgaccatgtt	ttagactgta	540
gtgaacacca	ggctgaccat	tccaatttta	tagcctgagg	aaaaaaaggc	aaaggaggcc	600
ctgaggaaag	gtcttaataa	agccaagttg	ttc			633

<210> 511

<211> 945

<212> DNA

<213> Unknown (H38g360 nucleotide)

<220>

<223> Synthetic construct

<400> 511

atgagttcct	gcaacttcac	acatgccacc	tttgtgctta	ttggtatccc	aggattagag	60
aaagcccatt	tctgggttgg	cttccccctc	ccttccatgt	atgtagtggc	aatgtttgga	120
aactgcatcg	tggtcttcat	cgtaaggacg	gaacgcagcc	tgacgctcc	gatgtacctc	180
tttctctgca	tgcttgacgc	cattgacctg	gccttatcca	catccaccat	gcctaagatc	240
cctgcccctt	tctgggttga	ttcccagagag	attagctttg	aggcctgtct	taccagatg	300
ttctttatct	atgccctctc	agccattgaa	tccaccatcc	tgctggccat	ggcctttgac	360
cgttatgtgg	ccatctgcca	cccactgcgc	catgctgcag	tgctcaacaa	tacagtaaca	420
gcccagattg	gcatcggtgg	tgtggtccgc	ggatccctct	tttttttccc	actgcctctg	480
ctgatcaagc	ggctggcctt	ctgccactcc	aatgtcctct	cgcactccta	ttgtgtccac	540
caggatgtaa	tgaagttggc	ctatgcagac	actttgccca	atgtggtata	tggtcttact	600
gccattctgc	tggtcatggg	cgtggacgta	atgttcatct	ccttgctcta	ttttctgata	660
atacgaacgg	ttctgcaact	gccttccaag	tcagagcggg	ccaaggcctt	tggaacctgt	720
gtgtcacaca	ttggtgtggg	actcgccttc	tatgtgccac	ttattggcct	ctcagtggta	780
caccgctttg	gaaacagcct	tcattccatt	gtgcgtgttg	tcatgggtga	catctacctg	840
ctgctgcctc	ctgtcatcaa	tcccatcatc	tatggtgcca	aaaccaaaca	gatcagaaca	900
cgggtgctgg	ctatgttcaa	gatcagctgt	gacaaggact	tgacg		945

<210> 512

<211> 834

<212> DNA

<213> Unknown (H38g361 nucleotide)

<220>

<223> Synthetic construct

<400> 512

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cgactgcatg	agcccatgta	cctcttctcg	gccatgcttt	ccactattga	cctagtcctc	120
tcctctatca	ccatgcccaa	gatggccagt	cttttccctga	tgggcatcca	ggagatcgag	180
ttcaacattt	gcctggccca	gatgttctct	atccatgctc	tgtcagccgt	ggagtcagct	240
gtcctgctgg	ccatggcttt	tgaccgcttt	gtggccattt	gccacccatt	gcgccatgct	300
tctgtgctga	caggggtgtac	tgtggccaag	attggactat	ctgccctgac	caggggggtt	360
gtattcttct	tcccactgcc	cttcactctc	aagtggttgt	cctactgcca	aacacatact	420
gtcacacact	ccttctgtct	gcaccaagat	attatgaagc	tgtcctgtac	tgacaccagg	480
gtcaatgtgg	tttatggact	cttcactcatc	ctctcagtea	tgggtgtgga	ctctctcttc	540
attggcttct	catatatcct	catcctgtgg	gctgttttgg	agctgtcctc	tcggagggca	600
gcactcaagg	ctttcaacac	ctgcatctcc	cacctctgtg	ctgttctggg	cttctatgta	660
cccctcattg	ggctctcggt	ggtgcatagg	ctgggtgggc	ccacctccct	cctccatgtg	720
gttatggcta	atacctactt	gctgctacca	cctgtagtea	accccttgt	ctatggagcc	780
aagaccaaag	agatctgttc	aagggtcctc	tgtatgttct	cacaagggtg	caag	834

<210> 513

<211> 957

<212> DNA

<213> Unknown (H38g362 nucleotide)

<220>

<223> Synthetic construct

<400> 513

atgctgggtc	cagcttataa	ccacacaatg	gaaacccctg	cctccttctt	ccttgtgggt	60
atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120
acagccctgt	taggaaacac	cctcatcgtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgttctg	gctgctgtgg	acattgttat	ggcctcctcc	240
gtggtaacca	agatgggtgag	catcttctgc	tggggagaca	gctccatcag	ctttagtgtc	300
tgtttcactc	agatgttttt	tgtccactta	gccacagctg	tggagacggg	gctgctgctg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccgtcacca	tcagagctgt	cacattcatg	480
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tcctactgta	agcacatagc	tttggccagg	ttagcatgtg	ctgaccccg	gccagcagt	600
ctctacagtc	tgattgggtc	ctctcttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcag	ggcagtattt	gatctctcct	caaagactgc	tcagttgaaa	720
gcattaagca	catgtggctc	ccatgtgggg	gttatggctt	tgtactatct	acctgggatg	780
gcattccatc	atggggcctg	gttggggcag	gatatagtgc	ccttgacacac	ccaagtgtcg	840
ctagctgacc	tgtacgtgat	catcccagcc	actttaaatc	ccatcatcta	tggcatgagg	900
accaaacaat	tgctggaggg	aatatggagt	tatctgatgc	acttctctct	tgaccac	957

<210> 514

<211> 966

<212> DNA

<213> Unknown (H38g363 nucleotide)

<220>

<223> Synthetic construct

<400> 514

atgaatgaga	caaatacttc	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagtcca	60
agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatactcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttctgc	taccctaaa	240
atgattgcag	actttctggg	tgagcacaag	actatttctt	ttgatgcccc	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgctg	tcgtcctcat	ttcctgggtt	gtgggcttca	tccataccac	cagccagttg	480
gcattcacgt	taatctgcca	ttttgtggtc	ctaataagggt	agatagtttt	tttctgtgac	540
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gcagatagtg	gctttctttc	tctgagttcc	tttctctctt	tggttgcttc	ctacactgta	660
atacttggtta	cagttaggaa	tcgctcctct	gtaagcatgg	tgaaggccca	ctccacattg	720
actgctcaca	tcactgtggg	cacttttatc	tttggatcgt	gtattttcat	ctatgtgtgg	780
cccttcagca	gttactcagt	tgacaaagtc	cctgctgtat	tctacaccat	cttcacgtct	840
attttaaacc	ctgtaatcta	catgctaaga	aacaaagaag	tgaaggcagc	tatgtcaaaa	900
ctgaagagtc	ggtatcagaa	gcttggtcag	gtttctgtag	tcataagaaa	cgttcttttc	960
ctagaa						966

<210> 515

<211> 966

<212> DNA

<213> Unknown (H38g364 nucleotide)

<220>

<223> Synthetic construct

<400> 515

atgctgggtc	cagcttataa	ccacacaatg	gaaacccctg	cctccttctt	ccttgtgggt	60
atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120

atagccctgt	taggaaacac	catcatcgtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgtttctg	gctgctgtgg	acattgttat	ggcctcctcg	240
gtggtaccca	agatggtag	catcttctgc	tcaggagaca	gctcaatcag	ctttagtgtc	300
tgtttcactc	agatgttttt	tgtccactta	gccacagctg	tggagacggg	gctgctgctg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
acgcctcaag	tgatgctggg	aatgagtatg	gccatcacca	tcagagctat	catagccata	480
actccactga	gttggatggg	gagtcactta	cctttctgtg	gctccaatgt	ggttggtccac	540
tcctactgtg	agcacatagc	tttggccagg	ttagcatgtg	ctgaccccg	gcccagcagt	600
ctctacagtc	tgattgggtc	ctctctttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcaa	ggcagtatct	ggtctctcct	caaagactgc	tcagttgaaa	720
gcattaagca	catgtggctc	ccatgtgggg	ggtatggctt	tgtactatct	acctgggatg	780
gcatccatct	atgcggcctg	gttggggcag	gatgtatg	ccttgccacac	ccaagtcctg	840
ctagctgacc	tgtacgtgat	catcccagcc	accttaaate	ccatcatcta	tggcatgagg	900
accaaacaac	tgcgggagag	aatatggagt	tatctgatgc	atgtcctctt	tgaccattcc	960
aacctg						966

<210> 516

<211> 942

<212> DNA

<213> Unknown (H38g365 nucleotide)

<220>

<223> Synthetic construct

<400> 516

atggaggggt	tcaactattc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agatattctt	ttctgtgggtg	ttttctgtct	tctattttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtccta	tccacctcac	accttcactc	tcgcatgtac	180
ttcctgctca	gcaacatgtc	tcattgacat	gtgcctgtcc	tcctttgcca	caccaaagat	240
gattatggac	ttttttgctc	tgcgtaagac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ttgatctcca	tgtcttttga	360
caggtatatt	gccatatgta	aacctctcca	ctattcaaca	attatgagcc	aaagagtgtg	420
tggttagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttccttttg	tcattccagt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagt	gtgtgattgc	tcttataagt	tttctgcttt	tgctcacctc	ctacatcatt	660
gttcttaata	ttgtcaggga	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcgcatt	ttattgttgt	gttaatgttc	tttgggcctt	gtattttcat	ttatgtgtgg	780
ccttccacaa	acttctgtgt	agacaaaatt	ctctccgttt	tctataccat	cttcaactcc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgctc	cg		942

<210> 517

<211> 952

<212> DNA

<213> Unknown (H38g366 nucleotide)

<220>

<223> Synthetic construct

<400> 517

atgctcactt	ttcataatgt	ctgctcagta	cccagctcct	tctggctcac	tggtcatccca	60
gggctggagt	ccctacacgt	ctggctctcc	atcccttttg	gctccatgta	cctgggtggct	120
gtggtgggga	atgtgaccat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatctt	ctgggttcgt	gcttgtgaca	ttggcctgga	cgcttgcttg	300
ggccaaatgt	tccttatcca	ctgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	gtacgtggc	ccatctgcaa	cccactacgt	catagcatgg	tgctcactta	420
tacagtgggt	ggctgtttgg	ggcttgtttc	tctcctccgg	ggtgttctct	acattggacc	480
tctgcctctg	atgatccgcc	tgcggctgcc	cctttataaa	acccatgtta	tctcccactc	540
ctactgtgag	cacatggctg	tagttgcctt	gacatgtggc	gacagcaggg	tcaataatgt	600

ctatgggctg	agcatcggct	ttctgggtgtt	gatcctggac	tcagtggcta	ttgctgcac	660
ctatgtgatg	atcttcaggg	ccgtgatggg	gttagccact	cctgaggcta	ggcttaaaac	720
cctggggaca	tgcgcttctc	acctctgtgc	catcctgac	ttttatgttc	ccattgctgt	780
ttcttccctg	attcaccgat	ttggtcagtg	tgtgcctcct	ccagtccaca	ctctgctggc	840
caacttctat	ctcctcattc	ctccaatcct	caatccatt	gtctatgctg	ttcgacacaa	900
gcagatccga	gagagccttc	tccaaatacc	aaggatagaa	atgaagatta	ga	952

<210> 518

<211> 301

<212> DNA

<213> Unknown (H38g367 nucleotide)

<220>

<223> Synthetic construct

<400> 518

cagatgctga	cagattgggtg	gggacctaata	aggaccacaa	gttacgtgaa	ctcaccattc	60
aattccttgt	ctctctgtag	ttatgtgccca	ctatataaatt	tctacaatta	ttttataaatt	120
atatgccatc	ctttgttaata	tttggttaatc	atgaacctat	atctcctcct	taatcttact	180
ttaatacttg	agggataaatt	cattcattttt	tggcatcatg	tatactctca	tcctaaaaat	240
tccaaggatg	aaaaaaaaaaa	accttcagat	aattcccctc	attggttgct	gccttgctga	300
a						301

<210> 519

<211> 506

<212> DNA

<213> Unknown (H38g368 nucleotide)

<220>

<223> Synthetic construct

<400> 519

aatagtga	ccaagcattt	cttactctta	aaattgtgtt	caatgtttgc	agtcactttc	60
ctatccctga	tattatcagg	aaagggcctg	caatttcctt	tctacttctc	tgagtcaact	120
gcaaagtctc	agatgttttc	acagttgaga	caagagaaca	agaagcacca	atgaaaacca	180
cggggttcta	tggaggcatc	atggtgtggt	gagtagaagc	atgctactct	agctgtatct	240
cactgggttc	aaatcctgac	tatacggcac	atggtgcatt	aacagcccgc	tgaccacaag	300
aatttctatg	ctggtaaaat	agggtttataa	taatgccagt	caatctaaag	atgctttaag	360
tgaagactat	ttgggtgttt	tcaaggactc	aataatcatt	aactgtgac	acgatcttcc	420
ccttacctac	tttcaataag	taaataattt	acattttatta	aacaaaagaa	atttaattct	480
gcttttctga	aacaacacaa	ttctat				506

<210> 520

<211> 837

<212> DNA

<213> Unknown (H38g369 nucleotide)

<220>

<223> Synthetic construct

<400> 520

ctccctcccc	tggttttttag	agttttttgta	attttgggttt	gtttcactac	tctttgttaa	60
gctatgcatt	ctctttctaa	ttattctact	tgttaaattt	ttattaaaaa	caaaaatagc	120
aatgacatat	tttaccatatt	tatctaatta	taagctcaaa	gcatgaaata	gtattgactt	180
ccacatacat	atgttttgtgt	acgtgtatat	tatgaataaa	ttagttcatc	tcaaatatga	240
aactttaaca	tctttaccat	ttttttggaa	tagtctagga	tttttagacac	ttcttaattt	300
tggtttacct	tttatgtcac	atattcttca	ttaatagtta	ttaatatgtt	gtatttttcta	360
gctgttcttg	caaaaagtag	ttttatttta	tgtttcaaca	gtctcagcgt	caactgtgac	420
actttctgtg	tttggctttc	ttgtttttgga	attgtttatc	ttgatgtgca	tcccattgca	480
cattgttatg	tttctcaaaa	gattatttaa	atgttatgtg	tttttatgat	cactcgtttt	540
ttgcttcatg	catgcattat	tgccttaaac	attaaaaaat	acttgttttg	atgtgctttt	600

tatctttata	tgtgaaaaat	ctttgctggc	taatatgtct	tttgtcacia	ttgtttcctc	660
cttaattctc	ttaacgaatt	aagagattat	ttcattttct	tctgtcattt	tatgtgggtac	720
aatacatctg	aatctgtcct	cattttttct	acatagggtt	ttcattttct	ttttctgctt	780
gaaattgcca	acatatatct	aaatgttgac	ctacttagta	ttatactgac	tttggtta	837

<210> 521

<211> 461

<212> DNA

<213> Unknown (H38g370 nucleotide)

<220>

<223> Synthetic construct

<400> 521

tgcacatgt	gtgtttggct	cttagcttga	gacaggcaaa	tccacatata	ctcacattcc	60
aacaagccaa	agcaagtcac	ccaccccat	gcttctggga	caaggatgta	cattcctcct	120
gggcgtgggg	gtgcgggtac	cgcaagggga	ataaatTTTT	cctgagctac	gatacactct	180
cccacaaaa	gtcatacacc	catttagata	acaacttttc	ttgagtagtt	cagatatcat	240
caatgatcca	catattgata	aacatgactc	gacactaata	acactgtgag	cattttacac	300
tattttctat	aaactccact	atgctccatt	tattctcaga	aattctctct	atgatatact	360
tcatgggcac	aaagaagaat	gagtgaagc	cacgcaaaaa	ggactgtgaa	agccactaaa	420
aagggtctga	ataaatggga	caaatcatca	tactcttcta	t		461

<210> 522

<211> 554

<212> DNA

<213> Unknown (H38g371 nucleotide)

<220>

<223> Synthetic construct

<400> 522

cctgtcacc	cccgttcccc	ccaccaccct	ctctttcccc	cttacatcta	cccaaaaact	60
ttttccccac	catctttccg	caaaaccttc	tctccctcct	gttcaccacc	gtttttcccc	120
ctccacctac	ccccaacatt	ttttccccac	cgtcttttcc	tcactgtctt	ttttgcaaca	180
ccttctcttg	ctcgccatcc	tcttttccct	ttggcaactaa	ccaccctctt	tactcctcca	240
tctaccccaa	aactattttc	cccttccctc	cgctccagcc	acactgcagt	ctccgtcgtc	300
gccaccaaac	gcagcgaggc	gagctgtggg	gccgcagcca	cagcctccag	catgcagcgg	360
tggttagccc	ttgtcctggg	cctctaagcc	gggaacggag	cagccccgcg	cgcagacacg	420
catgagccta	gaacggcctg	acacccttcc	agcaccattt	atatactgag	gttatgcata	480
tgagggttct	ggactacatg	ttccaggatt	gggtaagaga	aaacgcagag	gcctactctg	540
attggacttt	gtta					554

<210> 523

<211> 424

<212> DNA

<213> Unknown (H38g372 nucleotide)

<220>

<223> Synthetic construct

<400> 523

tatatagaaa	tggacaacta	ttttctaaca	taactataac	gatattttact	atTTTTccat	60
tttataatct	ctactcaata	ttttgggtatt	aaaaaattca	tcctaacttc	tttgttgggt	120
tattgttttt	gatgttcagc	attactaaat	ttttgactta	tggtttgaaa	tggtgtctca	180
ttcctgattg	ctgacccctg	tatcaacatg	cctgatttta	cccttaacaa	attctattct	240
tacaaaatag	ctgaagtggg	ttggagggtt	atttttacca	tttcttttat	ttgctgtccc	300
ttttgataaa	attattttcc	ttagttaaaa	aatgtattta	aataagtaaa	taatatctgt	360
gctagttggg	actcgggtgga	catttcagag	gtgtgtccat	acttttatgta	ttttatcact	420
gttt						424

<210> 524
 <211> 246
 <212> DNA
 <213> Unknown (H38g373 nucleotide)

<220>
 <223> Synthetic construct

<400> 524
 aatgtattta ggtaatttct tgactttctgc agggactctg atatacacag agcgtacctg 60
 tgtatactgt ccagtttagct cagattctca gttttgggca ttttctaagg gagggcaatg 120
 aacatcctga taggtttaac taagggttta aaatgtccaa ttttatgtgt ggtttttaac 180
 cacacctgca tcctaattac gaccttggct gttatagctt atagggttag gcaatctgga 240
 tatagt 246

<210> 525
 <211> 619
 <212> DNA
 <213> Unknown (H38g374 nucleotide)

<220>
 <223> Synthetic construct

<400> 525
 gaaattatat tgattgggat ttctctcaaa ctaatctagt tgtattcacc attattaaaa 60
 ttaagtgaca ctcaattgga ctaagtagca ataaaaatat gagacttcct agtgattttt 120
 ttttatccca agccatttac tactgatggg cttgatgtg tgtgcttgaa aacaaaacat 180
 atgcaagtgt tagactgggt tgaagatttg ggtggtgaaa gttagctaata tagatgtcag 240
 tgctctatct agaagccaat cttggaaata tgggataatg cccttttaaa atagctgaaa 300
 agaaattatt ttgtgtttgt tttcacttca ttcttgtttg gttgtatagc atttaagtga 360
 aaggagattt tttatcctta tactagtatt tgcatttacc atcttttaat gatggagaga 420
 aaagttagtt gtcttacttt gatagtgttg gcattggacc tatgacactt ttgatgtttt 480
 tggtcacagt tctgtcacta gaatgctagc aattagatat atgcaatgag taacctactt 540
 taatacaatg gtttgaagta ccacaggcag taactcctaa acaccaaata acagtgtttt 600
 aatttgaac atgttaaag 619

<210> 526
 <211> 939
 <212> DNA
 <213> Unknown (H38g375 nucleotide)

<220>
 <223> Synthetic construct

<400> 526
 atgagaaatt tgagtggagg ccatgtcgag gagtttgtct tgggtgggttt ccctaccacg 60
 cctccctccc agctgtcctt ctttgtcctt ttttttgcaa tttaccttct gacattgttg 120
 gagaatgcac ttattgtctt cacaatatgg cttgtctcaa gccttcacg tcccatgtac 180
 tttttccttg gccatctctt ttctctggag ctatggtaca tcaatgtcac cattcctcgg 240
 ctcttggcag cctttcttac ccaggatggg agagtctcct acgtagggtg catgacccaa 300
 ctgtacttct ttattgcctt agcctgtact gaatgtgtgc tgttggcagt tatggcctat 360
 gatcgctacc tggccatctg tggaccctct ctttacccta gtctcatgcc ttccagtcg 420
 gccactcgcc ttgtctgtgc ctcttggggc agtggcttct tcagctccat gatgaagctt 480
 ctttttattt cccaattgtc ctactgtgga cccaacatta tcaaccactt tttctgtgat 540
 atttccccac tactcaacct cacctgtctt gacaaggagc aagcagagct agtagacttc 600
 cttctggccc tgggtgatgat tctactccct ctattggctg tggtttcac atactctgcc 660
 atcattgcag ccacctcgag gatccctacg tccaggggac gccacaaagc cttttccact 720
 tgtgccgctc atctggcagt ggttgttata tactactcct ccactctctt cacctatgca 780
 cggccccggg ccatgtacac cttcaaccac aacaagatta tctctgtgct ctacactatc 840
 attgtaccat tcttcaacct agccatctac tgcttgagga acaaggagggt gaaggaggcc 900
 ttcaggaaga cagtgtgagg cagatgtcac tatcctagg 939

<210> 527
 <211> 965
 <212> DNA
 <213> Unknown (H38g376 nucleotide)

<220>
 <223> Synthetic construct

<400> 527
 cacacagagc cactgaatct cacagggtgtc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagccggc cctcgttttg ctctccctgt ccctgtccat gtatctgggc 120
 acgggtgctga ggaacctgct cagcatcctg gctgtcagct ctgactccca cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcggttacac ctgggccacg 240
 gttcccaaga tgattgtgga cagcgagtcg catggcagag tcatctctca tgctggctgc 300
 ctgacacaga tgtctttctt ggtccttttt gcatgtatag aagacatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt tgcctctgc actaccagc catcgtgaat 420
 cctcacctct gtgtcttctt cgttttgggt tcctttttcc ttagcctggt ggattcccag 480
 ctgcacagtt ggattgtgtt acaattcacc atcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaactt gctgttctg acagcgtcat caatagcata 600
 ttcatatatt ttgatagtac tatgtttggt tttcttccca ttccagggat ccttttgtct 660
 tactctaaaa ttgtcccctc cgttctaaag atgtcatcgt cagatgggaa gtataaagcc 720
 ttctccacct gtggctctca cctagcagtt gtttgtctgt ttgatggaa aggcatggc 780
 atgtacctga cttcagctgt ggcaccacc cccaggaatg gtgtcgtgga gtcagggatg 840
 tacgctgtgg tcaccccat gctgaacctt ttcattaca gcctgagaaa caggcacaca 900
 caaagtgcc tgcgagggt gcgcacagaa cagttgaate tcatgatctc ttgcatcctt 960
 tttct 965

<210> 528
 <211> 557
 <212> DNA
 <213> Unknown (H38g377 nucleotide)

<220>
 <223> Synthetic construct

<400> 528
 ccagtacccc agcatctggt cttcttctctg aaagtgactg gccaccattg acctaaatca 60
 gaaacctatg atttgtccca gatttttctt tttcccttgc tcttcataatc tatcagtgat 120
 actaattcta aactaacctt aacgaactgc atctgtgccc ctctctcacc tctcctccct 180
 cactttcagt gcattgactg aggctacacc atgtgaatta ttaccatggc atgctaacag 240
 aattattgct tccaatggta ccatgccata attcatcctt catatgggtg ccaataaatt 300
 tttaaaatat ttatttgtat ctgctaattc tcagggtaaa agcttcccag catgttgaag 360
 atggaatgca aacagctctg catgcatgcc ctttgcctat gcagctccta ttgtccatcc 420
 cccactctta cccactcttg ctggataatt cttttttatt ctttaagactt catccaagaa 480
 gcaagctctc atatttctt catatacttc tgtcatagcc ctttacatat gttaatcacc 540
 tgttaccttt tctcttg 557

<210> 529
 <211> 1007
 <212> DNA
 <213> Unknown (H38g378 nucleotide)

<220>
 <223> Synthetic construct

<400> 529
 tctagagacc cacagaatct aacagatgtc tctatatcc tcctcctaga agctcagagg 60
 atccagaacg gcagccggc ctcaactgggc tgttctgtc cagtgccctg gtcattggcg 120
 tggggaacct gctcatcacc ctggccatca gccctgactc ccacctccac acccccatgt 180
 acttcttctt ctccaacctg tccttgccctg acatcagttt cacctccacc acagtcccca 240

agatgactgt	ggacatccaa	tctcacagca	gagtcattct	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggagacag	acatactcct	gagtgtgatg	360
gcctatgacc	agtttgtagc	caaagtgcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gctttctact	tttgttgtct	tttttttttc	cctcagtctt	ttagatgccc	480
agctgtacaa	tttgattgcc	ttacaaatga	cctgcttcaa	ggatgtggaa	attcctaatt	540
tcttctgtga	cccttctcaa	ctcccccatc	ttgcatgttg	tgacaccttc	aacaataaca	600
taatcctgta	tttccctgat	gccatatttg	gttttcttcc	catctcgggg	acacttttct	660
cttacgataa	aattgtttcc	tccattctga	gggtttcctc	atcaggtggg	aagtataaag	720
ccttctccac	ctatgggtct	cacctgtcag	atgtttcctg	attttatgga	acaggcgttg	780
gagggtagct	cagttcagat	gtgtcatctt	ccccgagaaa	gactgcagtg	gcctcagtga	840
tgtacgcagt	ggtcaccccc	atgatgaacc	ccttcatcta	cagtccgaga	aacagggata	900
tgaaaagtgt	cctgcgggcg	ccgcacggca	gcacgttcta	atctcaatac	cttcttatct	960
gttccattcc	ttttgcagtg	tgggtcgaaa	aaggctgcat	gatgaaa		1007

<210> 530

<211> 471

<212> DNA

<213> Unknown (H38g379 nucleotide)

<220>

<223> Synthetic construct

<400> 530

tttttaaaaa	tgagattaaa	ggaattaatg	taagatagaa	ccataatgga	ttattggagg	60
gaaggtaggc	acatttaggg	gattgtcttg	gcctttccgt	ttggctgacc	tatcccaaaa	120
cttttctctt	gggtctctat	cagagacatg	gcagtaacct	ggatggacca	taggcacgag	180
tcctgtagcc	catttctccc	gaagctgcag	cctttttcat	cctgccatgt	atctgagtta	240
tgacagtgcc	ttgacacctt	cactaaatca	tatataactt	gaatccgggg	actcaagggt	300
ttcaaccatc	tttggttttct	tctccattac	tgctactgtg	ctagagccca	agtctcctga	360
aatgcgccct	ggagccttgc	tcaaagatgt	caacccaaca	tgctgatcag	gtagctatct	420
tgtctgaagc	tggtagtcca	tgacaggctc	tgacatgtgc	tgagcttgct	c	471

<210> 531

<211> 974

<212> DNA

<213> Unknown (H38g380 nucleotide)

<220>

<223> Synthetic construct

<400> 531

atgaagatca	accagacaat	cctgaaggaa	ttcattcttg	ttggcttttc	tgtgtaccca	60
catgtacaga	catttctttt	tgtgggtctt	ttttgtctct	accttctcac	ccttgcaggc	120
aatctgacca	tcatgggtct	aacttgagtg	gacaggctcc	tccacacccc	tatgtatctc	180
ttccttagtg	cactctcctt	ctctgagacc	tgctatacac	tgaccatcgt	ccccaaagatg	240
ctggaagatc	tactggccaa	ggacagaagc	atttcagtca	cagggtttag	cttacagatg	300
tgcttcttct	tgggacttgg	tggcacaaac	tgtatcattc	tcactttgat	gggatatgac	360
cgcttcctgg	ccatttgtaa	ccctctaaga	tatccactgc	ttatgaccaa	cattgtatgt	420
ggacaacttg	tggcctctgc	ttgcactgca	ggcttcttta	tctctcttac	agagactgca	480
ctgatattca	gggactcttt	ctgcagaccc	aaccttgtca	aacacttctt	ctgccatatg	540
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atctcagtg	ctgggttggc	gggtaccctt	ctgtcctatc	tectgactga	tgtcttcatt	660
atttctactg	tcttcaggat	cccttcagct	gagggcaagc	agaaggcctt	caccacctgt	720
gcctccacc	tcaccgtgg	tataatccac	tttgggtttg	catctattgt	ttatttgaag	780
ccagaagcct	caggagatga	cacactcata	gcagtcctct	atactgtcat	taccccttct	840
ctcagcccca	tcatattcag	cctgaggaat	aaggacatga	aaaatgcttt	tagaagaatg	900
atgggaaaca	cagttgcctt	gaaaaaataa	tcttgggttg	ttgctgcttg	tttgaagaag	960
ggctcaatgt	cccc					974

<210> 532

<211> 939

<212> DNA

<213> Unknown (H38g381 nucleotide)

<220>

<223> Synthetic construct

<400> 532

atggggcaga	ccaacgtaac	ctcctggagg	gattttgtct	tectgggctt	ctccagttct	60
ggggagttgc	agctcccttct	ctttgccttg	ttcctctctc	tgtatctagt	cactctgacc	120
agcaatgtct	tcattatcat	agccatcagg	ctggatagcc	atctgcacac	ccccatgtac	180
ctcttccctt	ccttccctac	cttctctgag	acctgctaca	ctttgggcat	catccctaga	240
atgctctctg	gcctggctgg	gggggaccag	gctatctcct	atgtgggctg	tgctgcccag	300
atgttctttt	ctgcctcatg	ggcctgtact	aactgcttcc	ttctggctgc	catgggcttt	360
gacagatatg	tggccatctg	tgctccactc	cactatgcca	gccacatgaa	tcctaccctc	420
tgtgcccage	tggtcattac	ttccttccctg	actggatacc	tctttggact	gggaatgaca	480
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acgccacctg	tgctgagcct	agcctgtgga	gatacaggcc	cgagtgaact	gaggatcttt	600
atcttcagtc	ttttggctct	cttggctctc	ttcttcttca	tcaccatctc	ctaccctac	660
atcttggcag	caatacctag	gatccccctc	gctgaggggc	agaagaaggc	cttctccact	720
tgtgcctcgc	accttacagt	ggtcattatt	cattatggct	gtgcttccct	cgtgtacctg	780
aggcccaaag	ccagctactc	tcttgagaga	gatcagctta	ttgccatgac	ctatactgta	840
gtgaccccc	tccttaatcc	cattgtttat	agtctaagga	ctagggctat	acagacagct	900
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<210> 533

<211> 866

<212> DNA

<213> Unknown (H38g382 nucleotide)

<220>

<223> Synthetic construct

<400> 533

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gtgttctttg	ccatcaaact	ggatttctgc	ctgcacagct	ccttgtattt	cttcatcagt	120
gtcctctcct	tcctagagat	ctggtatacc	accatcacca	tccccaagat	gttcttcaac	180
ctagccagtg	agcagaagac	cacctccctg	gatggttgcc	tattgcagat	gtatttcttt	240
tactccctcg	gcatacactg	ggtttgcttg	ctcaccacca	gggctatgga	cagatacctg	300
gccatctgta	atcacctttg	ctacccca	gtcacgacac	cttagctcta	cactcaggtg	360
attctaggtt	gttgcatctg	tggtctcttc	acgctgctcc	ctgagattgc	ttggatatcc	420
acactgccat	tttgtggtcc	aaatcaaata	cacaacattt	tctgtgacct	tgatccctatc	480
ctgaatctag	catgtgtaga	cactggccca	gttgttttaa	tcaaggttgt	ggacattgta	540
catgctgtgg	agatcatcac	agctataatg	cttgtgactt	tggcttacgt	ccaaattatt	600
gcagtgatcc	taagaaactg	ctctgctgat	ggatgccaaa	aggcattttc	tacctatgct	660
ttccaccttg	ctattttctt	aatctttttt	ggaagtgtag	cctgatgta	cctgctcttc	720
tctgccaagt	actccttttt	ctgggacaca	accatcagcc	taatgtttgc	agtgctgtca	780
ccgacacaat	catctgtagt	ctgaggaata	aagagataaa	ggaagcaata	aaaaagcaca	840
tgtgccaatc	aatgatatgc	acacat				866

<210> 534

<211> 954

<212> DNA

<213> Unknown (H38g383 nucleotide)

<220>

<223> Synthetic construct

<400> 534

atggagagcc	ccaatcgaac	caccattcag	gagtttatct	tctccgcttt	cccttattcc	60
tgggttaagt	ctgttgtctg	ctttgttcca	ctgctcttca	tctatgcttt	cattgttggt	120
ggaaacctgg	tcatcatcac	agtgggtccag	ttgaatactc	acctccacac	tcccatgtat	180

acttttatca	gtgctctttc	tttcctggag	atttggtata	ccacagccac	aatcccaaag	240
atgctgtcta	gcctgcttag	tgagaggagc	atttccttca	atggttgtct	cctgcagatg	300
tatttcttcc	attccaccgg	catctgtgag	gtgtgtctct	tgacagttat	ggcctttgac	360
cactacctgg	ccatatgcag	ccctcttcat	tatccctcta	tcacgacccc	caagctatgt	420
acccaactga	ctttaagttg	ctgtgtttgt	ggctttatca	caccccttcc	tgagattgcc	480
tggatctcta	cactgccatt	ttgtggttcg	aatcaccttg	aacatatctt	ctgtgacttc	540
ctcccagtg	tgcgtctggc	ctgcacagac	acacgagcca	tcgtcatgat	tcaggtagtg	600
gatgtcattc	atgcagtggg	gattattaca	gctgtgatgc	tcaccttcat	gtcctacgat	660
ggatattgtg	ctgtaattct	acgtattcat	tcagctggag	gccgccgcac	agcattttcc	720
acgtgtgtct	ctcacttcat	tgtcttttct	ctcttctttg	gcagtgtgac	tctcatgtac	780
ctacgcttct	ctgccacctc	ctctttgttc	tgggatatag	ccattgctct	ggcctttgca	840
gttttgtctc	cttctttaa	ccccattatc	tatagcctga	ggaataaaga	aataaaagaa	900
gctataaaaa	agcacatagg	tcaagctaag	atattttttt	ccgtaagacc	aggg	954

<210> 535

<211> 386

<212> DNA

<213> Unknown (H38g384 nucleotide)

<220>

<223> Synthetic construct

<400> 535

ctactgaaac	tctcctgctc	agacacacac	ctcaatgagg	tcataatcct	tagtgagggg	60
gccctgggtc	tgatcacccc	atttctttgc	atcctggctt	cttatatgca	catcacctgc	120
actgtcctga	aggtcccatc	cacaaaggga	aggtggaaag	ccttctccac	ctgtgggtct	180
cacctggctg	tggttctect	cttctacagc	accatcattg	ctgtgtattt	taaccctctg	240
tcttcccact	cagctgagaa	agacactatg	gctactgtgt	tgtatacagt	agtgactccc	300
atgctaaacc	ctttatctac	agcctgagga	acaggtactt	gaaaggggct	ctgaaaaaag	360
tagttggcag	ggtgggtgtt	tctgtc				386

<210> 536

<211> 486

<212> DNA

<213> Unknown (H38g385 nucleotide)

<220>

<223> Synthetic construct

<400> 536

ctgctcatca	tcccagccat	tgccactgac	acccggetct	ctgtgctcgt	gcgctttttc	60
cttgccaacc	tggccttcgt	ggtcacttgc	ttcacctcca	ccaccatccc	caagatgctg	120
gacgtgcaaa	gagatccctt	gtgtcatgtc	aggatgcaaa	gggattcctt	atgctgggtg	180
cctgacccag	atgctcttct	tcacctgtta	ggcatccaca	gcttctctgt	gactgcaatg	240
gccaatgaac	actgtgtggc	catctgtcac	tctctgaact	ccatcaggtc	tgtgacacca	300
tagctctgtg	gctccttgg	gggtggcctcc	tggaccttcg	cattcaggaa	tgccctgacc	360
cacccagtgt	tactgaccgg	cctctcactc	tgcacctacg	agtgggtcag	ccatgtcttc	420
tgcaacctca	gccagctgct	gaagttggcc	tgtcagacg	ccactctcaa	caatgtgacg	480
tgcaaa						486

<210> 537

<211> 980

<212> DNA

<213> Unknown (H38g386 nucleotide)

<220>

<223> Synthetic construct

<400> 537

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ggcctggaat	ccctgcacat	ctggctctcc	atcccccttg	gctccatgta	cctggtagct	120

gtgctgggga	acataacccat	cctggcagtg	gtaaggatgg	agtacagcct	gcatcagccc	180
atgtacttct	tcctgtgcat	gttggctgtc	attgacttgg	tcctgtcaac	ctctaccatg	240
cccaaactac	tggccatctt	ctggtttggg	gccacaaca	ttgggtgtaa	tgccctgtttg	300
gcccagatgt	tcttcattca	ttgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	actatgtggc	catctgtgac	ccactgcatc	ataccttgtt	gctcacccat	420
gctgtgggtg	gtcgtttggg	gctggctgcc	ctcctccggg	gggtaatcta	cattggacct	480
ctgcccctag	tgatttgtct	gaggttgccc	ctttaccaca	cccaaatacat	tgcccattcg	540
tactgtgagc	acatggctgt	ggtcaccttg	gcatgtgggtg	tgacacaagg	gtcaacaact	600
tatatggaat	ggggattggc	tttctgggtat	taatcctgga	ttcattggcc	atcactgcct	660
cctatgtgat	gattttcagg	gctgtaatgg	gcttggccac	ctctgaagcc	aggcttaaaa	720
ccttagggac	atgtggctct	cacatctgtg	ccatcctcgt	cttctacatc	cccattgctg	780
tttctctct	cacacaccgc	tttggccatc	gtgtgcctcc	ccatatccat	atccatatcc	840
atatccatat	ccatatccat	atccttttgg	ccaacattta	cctcctcacc	ccacctatcc	900
tcaacccaat	agtctatgct	gtccgcacaa	agcagatccg	agaggctctt	ctccatatta	960
aggcaaggac	tcaaaccagg					980

<210> 538

<211> 967

<212> DNA

<213> Unknown (H38g387 nucleotide)

<220>

<223> Synthetic construct

<400> 538

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gagttggcga	gttcctcttg	ctcagcatca	ccagtgaactc	agagaagcag	caggccctct	120
tctggctctt	cctgtgtatg	cacttagtca	ctgaggctgg	aaacacaccc	atcatcctgg	180
gcatcggctc	caaccctcgc	ctgcacaccc	ccaagtactt	cttcacccat	ctctcctttg	240
tcaacatctg	cttcatcacc	aacctgatcc	ccaagctcct	ggtaaccat	gtggcaggaa	300
cagggatgat	cacgatctct	tctccccagt	gcctgaactca	gatgtacttc	ctcatctcct	360
ttgccaacgt	ggacaccttt	ctgctggcca	tcattggcact	ggaccactat	gtggccatct	420
gcagcgcctt	gcggtactgc	tccatcatca	ccccggctc	tgtaaggggc	tgcccggtgt	480
agcgtgagca	ggctccagcc	tcattctcct	ggctccacacg	gtcatcatga	gcagactggc	540
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ctccctgtgc	gctcatcttg	gtctcctaca	tccgcattgc	tgagccatc	ctccggattc	720
cctctcctac	aagaaggcgc	aaggcatgtt	ccatatgtag	ctcccacctg	tctctggtca	780
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aggacacccat	agcaaccatc	atgtacactg	tggtgacctc	tatgctaaac	cccttcatct	900
acagtctgat	gaacaaggag	gtccaggagg	ccgtgagaag	gctcttcagt	aggggctcac	960
actcatc						967

<210> 539

<211> 603

<212> DNA

<213> Unknown (H38g388 nucleotide)

<220>

<223> Synthetic construct

<400> 539

cttcattttt	gtgggataga	tgtgacctca	taccaggctt	gacagatatt	ggcatagcaa	60
cccctacgac	actacataat	gtgggcaacg	cattgtcgca	ttatgctgtc	gcatgggaat	120
tgctttctcc	attcgttgag	ccagttggcc	tttgccgtgc	acttaccctt	ctgtgggtccc	180
aatgagttcg	atagttttta	ttgtgacctt	cctagggtaa	tcaaacttgc	ctgtacagat	240
acctacaggc	tagatattat	ggtcattgct	aacagtgggtg	tgctcactgt	gtgttctttt	300
gttctttctaa	tcattctcata	cactatcatc	ctaataacca	tccagcatcg	cccttttagat	360
aagtcgtcca	aagctctgtc	cactttgact	gctcacatta	cagtgttctt	tttgttcttt	420
ggaccatgtg	tctttattta	tgccctggcca	ttccccatca	agtcattaga	taaattcctt	480
gctgtatttt	attctgtgat	caccctctc	ttgaacccaa	ttatatacac	actgaggaac	540

aaagacatga agacggcaat aagacagctg agaaaatggg atgcacattc tagtgtaaag 600
 ttt 603

<210> 540

<211> 935

<212> DNA

<213> Unknown (H38g389 nucleotide)

<220>

<223> Synthetic construct

<400> 540

atgctcactt	ttcataatgt	ctgctcagta	cccagctcct	tctggctcac	tggcatccca	60
gggctggagt	ccctacacgt	ctggctctcc	atcccccttg	gctccatgta	cctgggtggct	120
gtgggtgggga	atgtgaccat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatcct	ctgggttcgt	gcttgtgaca	ttggcctgga	cgcttgcttg	300
ggccaaatgt	tccttatcca	ctgctttgcc	actgttgagt	caggcatcct	ccttgccatg	360
gcttttgatc	gtacgtggc	catctgcaac	ccactacgtc	atagcatggg	gtcacttat	420
acagtgggtg	gtcgtttggg	gcttgtttct	ctcctccggg	gtgttctcta	cattggacct	480
ctgcctctga	tgatccgcct	gcggctgccc	ctttataaaa	cccatgttat	ctccactcc	540
tactgtgagc	acatggctgt	agttgccttg	acatgtggcg	acagcaaggt	caataatgtc	600
tatgggatga	gcatcggctt	tctggtgttg	atcatggaat	cagtggatag	tgatgcatca	660
taggtgagga	gtatcagggc	cgtgatgggg	ttagccaatc	atgaggatag	gattagagac	720
catggggaca	ggcgaatatc	acatatgtgc	catcatgata	ttataggatc	ccagtgatgt	780
atattccatg	agatcaccga	gatggtcagt	gtgtgcatca	tccagtccac	aatatgatgg	840
ccaggatata	tatcatcagt	catccaagca	tcaagcccag	tgtataggat	gatcgcacca	900
agcagagccg	agagagctat	atccaaagag	caaga			935

<210> 541

<211> 945

<212> DNA

<213> Unknown (H38g390 nucleotide)

<220>

<223> Synthetic construct

<400> 541

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cacagtactg	ctgaccttgt	cctcttctcc	gtgggttatgg	cggtcttcac	agtggccctc	120
tgtgggaatg	tcctctctcat	cttctctcatc	tacatggacc	ctcaccttca	cacccccatg	180
tacttcttcc	tcagccagct	ctccctcatg	gacctcatgt	tggctctgtac	caatgtgccca	240
aagatggcag	ccaacttctc	gtctggcagg	aagtccatct	cctttgtggg	ctgtggcata	300
caaattggcc	tctttgtctg	tcttgtggga	tctgaggggc	tcttgctggg	actcatggct	360
tatgaccgct	atgtggccat	tagccaccca	cttctactatc	ccatcctcat	gaatcagagg	420
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acctgtctct	cccacctgac	agctgtcacc	ctcttctatg	gggcagccat	gttcatctac	780
ctgaggccta	ggcactaccg	ggccccccagc	catgacaagg	tggcctctat	cttctacacg	840
gtccttactc	ccatgctcaa	ccccctcatt	tacagcttga	ggaacagggg	ggtgatgggg	900
gcactgagga	aggggctgga	ccgctgcagg	atcggcagcc	agcac		945

<210> 542

<211> 975

<212> DNA

<213> Unknown (H38g391 nucleotide)

<220>

<223> Synthetic construct

<400> 542

atgggaagat	gggtgaacca	gtcctacaca	gatggcttct	tcctcttggg	catcttttcc	60
cacagccaga	ctgacctgt	cctcttctct	gcagttatgg	tggtcttcac	agtggccctc	120
tgtgggaatg	tcctcctcat	cttcctcctc	tacctggacg	ctggacttca	cacccccatg	180
tacttcttcc	tcagccagct	ctccctcatg	gacctcatgt	tggtctgtaa	cattgtgcca	240
aagatgcagc	caacttcctg	tctggcagaa	gtccatctcc	tttgtgggct	gtggcataca	300
aattggcttt	tttgtctctc	ttgtgggac	tgaggggctc	ttgctgggac	tcattggctta	360
tgaccgctac	gtggccgtta	gccaccctc	tcactatccc	atcctcatga	atcagagggt	420
ctgtctccag	attactggga	gctcctgggc	ctttgggata	atagatggag	tgattcagat	480
ggtggcagcc	atgggcttac	cttactgtgg	ctcaaggagc	gtggatcact	ttttctgtga	540
ggtaacaagc	ttattgaagc	tggcctgtgc	agacacttcc	ctttttgaca	ccctcctctt	600
tgctgtctgt	gtcttcatgc	ttctccttcc	cttctccatc	atcatggcct	cctatgcttg	660
cactctaggg	gctgtgctcc	gaatacgtc	tgctcaggcc	tggaaaaaag	ccctggccac	720
ctgtctctcc	acctaacagc	tgtaaccctc	ttctatgggg	cagccatgtt	catgtacctg	780
agccctaggc	gctaccgggc	ccctagccat	gacaagggtg	cctctatctt	ctacacagtc	840
cttactccca	tgctgaaccc	cctcatctac	agcttgagga	atggggaggt	gatgggggca	900
ctgaggaagg	ggctggaccg	ctgcaggatt	ggcagccagc	actgaacccc	agagtctggt	960
gctgctgtg	ccct					975

<210> 543

<211> 942

<212> DNA

<213> Unknown (H38g392 nucleotide)

<220>

<223> Synthetic construct

<400> 543

atgggggatg	tgaatcagtc	ggtggcctca	gacttcattc	tggtgggcct	cttcagtcac	60
tcaggatcac	gccagctcct	cttctccctg	gtggctgtca	tgtttgcat	aggccttctg	120
ggcaacaccg	ttcttctctt	cttgatccgt	gtggactccc	ggctccacac	acccatgtac	180
ttctgtctca	gccagctctc	cctgtttgac	attggctgtc	ccatgggtac	catccccaag	240
atggcatcag	actttctgcg	gggagaagg	gccacctcct	atggagggtg	tgagctcaa	300
atattcttcc	tcacactgat	gggtgtggct	gagggcgctc	tggtggctct	catgtcttat	360
gaccgttatg	ttgctgtgtg	ccagccccctg	cagtatcctg	tacttatgag	acgccaggta	420
tgtctgtctg	tgatgggctc	ctcctgggtg	gtaggtgtgc	tcaacgcctc	catccagacc	480
ttcatcacc	tgcattttcc	ctactgtgcc	tcccgatttg	tggtatcact	cttctgtgag	540
gtgccagccc	tactgaagct	ctcctgtgca	gatacctgtg	cctacgagat	ggcgctgtcc	600
acctcagggg	tgctgatcct	aatgtccct	ctttccctca	tcgccacctc	ctacggccac	660
gtgttgcaag	ctgttctaag	catgcgctca	gaggaggcca	gacacaaggc	tgtaaccacc	720
tgtcctctgc	acatcacggg	agtggggctc	ttttatgggt	ccgccgtgtt	catgtacatg	780
gtgccttgcg	cctaccacag	tccacagcag	gataacgtgg	tttccctctt	ctatagcctt	840
gtcaccccta	cactcaaccc	ccttatctac	agtctgagga	atccggaggt	gtggatggct	900
ttgggtcaaag	tgcttagcag	agctgggactc	aggcaaagt	gc		942

<210> 544

<211> 350

<212> DNA

<213> Unknown (H38g393 nucleotide)

<220>

<223> Synthetic construct

<400> 544

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cctatcttat	atctttatcc	cttcaggcag	ttctacaact	ctcctctcag	aggcccgcga	120
caaagcattt	gggacatgtg	tctctcacat	agggtccatc	ttagccttct	acacaccttc	180
agtcattctt	tcagtcatgc	accgtgtggc	ccgctgtgct	gcgccacacg	tccacattct	240
cctcgccaat	ttctatctgc	tcttcccacc	catgggtcaat	cccatcatct	acggcggtta	300

gaccaagcag atccgtgaca gtcttgggag tattccccgag aaaggatgtg

350

<210> 545

<211> 948

<212> DNA

<213> Unknown (H38g394 nucleotide)

<220>

<223> Synthetic construct

<400> 545

atgcctagtc	agaactatag	catcatatct	gaatttaacc	tctttggctt	ctcagccttc	60
ccccagcacc	tcttgcccat	cttgttctctg	ctgtacctcc	tgatgttcc	gttcacattg	120
ctgggcaacc	ttctcatcat	ggccacaatc	tggtatgaac	acagactcca	cacacccatg	180
tacctcttct	tgtgcaccct	ctccgtctct	gagattctgt	tcactgttgc	catcacccct	240
cgcatgctgg	ctgatctgct	ttccacccat	cattccatca	cctttgtggc	ttgtgccaac	300
cagatgttct	tctccttcat	gtttggcttc	actcaactct	tccttctcct	ggatcatgggc	360
tatgatcgct	atgtggccat	ctgccacca	ctgcgttaca	atgtgctcat	gagccccgt	420
gactgtgccc	atcttgtggc	ctgtacctgg	gctgggtggc	cagtcattggg	gatgatggtg	480
acaacgatag	ttttccacct	cactttctgt	gggtctaata	tgatccacca	ttttttctgt	540
catgtgcttt	ccctcttgaa	gttggcctgt	gaaaacaaga	catcatctgt	catcatgggt	600
gtgatgctgg	tgtgtgtcac	agccctgata	ggctgtttat	tcctcatcat	cctctcctat	660
gtcttcattg	tggctgccat	cttgaggatt	ccctctgccg	aaggccggca	caagacattt	720
tctacgtgtg	tatcccacct	cactgtggtg	gtcacgcact	atagttttgc	ctcctttatc	780
tacctcaagc	ccaagggcct	ccattctatg	tacagtgaag	ccttgatggc	caccacctat	840
actgtcttca	cccccttct	tagcccaatc	attttcagcc	taaggaacaa	ggagctgaag	900
aatgccataa	ataaaaactt	ttacagaaaa	ttctgtcctc	caagttcc		948

<210> 546

<211> 990

<212> DNA

<213> Unknown (H38g395 nucleotide)

<220>

<223> Synthetic construct

<400> 546

atgtgttctt	ttttcttctg	ccaaacaggt	aaacaggcaa	aaatatcaat	gggagaagaa	60
aaacaaacct	ttgtgtccaa	gtttatcttc	ctgggtcttt	cacaggactt	gcagaccag	120
atcctgctat	ttatcctttt	ctcatcatt	tatctgctga	ccgtgcttgg	aaaccagctc	180
atcatcatc	tcactcttct	ggattctcgc	cttcacactc	ccatgtattt	ttttcttaga	240
aatctctcct	ttgcagatct	ctgtttctct	actagcattg	tcctcaagt	gttgggtcac	300
ttcttggtaa	agaggaaaac	catttctttt	tatgggtgta	tgacacagat	aattgtcttt	360
cttctggttg	ggtgtacaga	gtgtgcgctg	ctggcagtga	tgctctatga	ccggtatgtg	420
gctgtctgca	agccctgtga	ctactctacc	atcatgacac	aacgggtgtg	tctctggctg	480
tccttcagg	cctgggccag	tggggcacta	gtgtctttag	tagataccag	ctttactttc	540
catcttccct	actggggaca	gaatataatc	aatcactact	tttgtgaacc	tcctgccttc	600
ctgaagctgg	cttccataga	cacttacagc	acagaaatgg	ccatcttttc	aatgggctgt	660
gtaatcctcc	tggccctgt	ctccctgatt	cttgggtctt	attggaatat	tatctccact	720
gttatccaga	tgcagtctgg	ggaagggaga	ctcaaggctt	tttccacctg	tggtctccat	780
cttattgttg	ttgtcctctt	ctatgggtca	ggaatattca	cctacatgag	accaaactcc	840
aagactacaa	aagaactgga	taaaatgata	tctgtgttct	atacagcggg	gactccaatg	900
ttgaacccca	taatttatag	cttgaggaac	aaagatgtca	aaggggctct	caggaaacta	960
gttgggagaa	agtgtctctc	tcataggcag				990

<210> 547

<211> 676

<212> DNA

<213> Unknown (H38g396 nucleotide)

<220>

<223> Synthetic construct

<400> 547

ggaaaaggaaa	gagagacacg	ggtctggagg	ccgagagcgc	aagaccgggg	ggtgagcacc	60
cggcacgctg	cgagggtaac	aagctatcag	gaatgcgggg	tccgtggcgg	gggagtgttg	120
tgggcgcggt	taggccgagt	cctttagacg	cccagctgca	caacgtgatt	gcctacagaa	180
ggacctgctt	caaggatgtg	gaaattccga	atttcgctgt	gacccttctc	aattccccgt	240
cttgcatgtg	tggcaccttc	accaataaca	taatcatgta	tttccctgct	gccatatttg	300
gttttcttcc	catctcgggg	acccttttct	cttacgataa	aattgttttc	tccattctga	360
gggtttcatc	atcaggtggg	aagcataagg	ccttctccac	caggggggtct	cacctgtcag	420
ttgtttgctg	attttatgga	acaggcattg	gaggctacct	cagttcagat	gtgtcatctt	480
ccccgagaaa	ggctgcagtg	gcctcagtga	tgtacacggt	ggccatcccc	atgctgaacc	540
ccttcatcta	cagcctgaga	aacagggata	ttaaaagtgt	cctgcggcac	cgcacggcag	600
cacggtctca	tctcaatatc	ttcttatctg	ttccattcct	tttgtagtgt	gggttaaaaa	660
aggcagcaag	gtcaaa					676

<210> 548

<211> 992

<212> DNA

<213> Unknown (H38g397 nucleotide)

<220>

<223> Synthetic construct

<400> 548

atgaaaatct	tcaacacccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
ttcccttgct	ccaggggagg	acagatccct	ctcgttggtg	tcttcactgt	tgtttacctc	120
ctgaccctca	tgggcaatgg	ttccatcaac	tgtgctgtgc	actgggtcag	agactccatg	180
cccccatgta	catcctgtct	gccaacttct	ccttctctga	gatctgttat	gtcacctcta	240
cagtcccaaa	cgtgctggcc	aacttcctct	ctgacacaag	atcatctcgt	tctctggctg	300
cttccctcaa	ttctactttt	ttttctcctt	gggctctaca	gaatgctttt	tcctgggagc	360
tatggcattt	gacctatacc	ttgccatctg	ccggcctcta	cgctatccaa	ccattatgac	420
cagacgtctc	tgcaacattc	ttgtgggcag	ctgctgggta	cttgggtttc	tgtggttcct	480
gattcctatc	agtgtcattt	ctcaaatgac	ctgtggatct	aggattattg	accacttccc	540
atgtgaccca	ggtcctctgt	tagccctcac	ctgtgccaga	gcccccttac	tagagttgac	600
tagctccacc	ttaagttctc	tacttctatt	tattcccttt	ctcttcatcg	tggggtgcta	660
tgctctggtc	ctgagagctg	tgttgagggt	tccttcagca	tctggaagaa	gaaaggcttt	720
ctctacctgt	ggctcccacc	tggctgtagt	ttcactgttt	atggctcaat	gatgatcacg	780
tatgtgagcc	caacatctgg	gcataaattc	ggaatgcaga	agactgtgac	tctgttctat	840
tctgtgggtca	ctcccccttat	taatcctgtc	atatacagtc	tgaggaacaa	ggaaatgaaa	900
catgcaatga	ggaactacac	tgtaatgttt	tattttctag	aattcatagg	gctacaagag	960
atgtcaaaga	tgtattctat	ctctttaatt	tt			992

<210> 549

<211> 805

<212> DNA

<213> Unknown (H38g398 nucleotide)

<220>

<223> Synthetic construct

<400> 549

ttctcaagta	tatatgcttg	tatatatcag	atctctatct	caactatcta	tctaatactc	60
tatctatatt	taaattagta	gactggatta	tcaattgtta	tttgtattat	attttacagc	120
ctactcactt	tattctagca	gttcattttac	acttgtgaaa	tgaatcaatt	taaatagtaa	180
caaaatagga	acaatctgac	aacttttttag	ggatacttct	actcaggaat	atgtggcagg	240
agaaactgta	caatgtgatt	gataacaatc	ttcattttga	aatattgcta	gcattggctc	300
atcacaaattc	actctgtcat	ggacagtggg	cagcacttgg	ccatctgcca	cccactgcac	360
taccttatcc	tcatgactga	tgaaaataga	gatcgaatgt	ttatggggccc	gctgacagcc	420
tttccctaca	ccgatgccac	atctcagaac	atgcactatg	taaattttct	tattatcatt	480
ctcagtattt	tgtacatccc	tggaccatat	acgttgatcc	taagagctat	gcttcagctg	540

ctttcagcag	ctagccatca	aaatgccttt	tctatccgtg	ggctctcactt	aatagtgggtg	600
tctctgttct	gtgaaacat	atgatgatgt	gtgtgaatct	catatctgac	catttagtat	660
aaatgaagat	gacaaatcac	aatatcataa	tgatatcctc	cataaagact	ctagtttttaa	720
actttgtcaa	ttacacctta	ctcaatatga	acttaaaacc	tatcttcagt	ttttttttta	780
tggaatgagt	attagccaaa	gctca				805

<210> 550

<211> 933

<212> DNA

<213> Unknown (H38g399 nucleotide)

<220>

<223> Synthetic construct

<400> 550

atgaaaatct	tcaacagccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
ttcccttgcc	ccagggagg	gcagatcctc	ctctttgtgc	tcttactgt	tgtttacctc	120
ctgaccctca	tgggcaatgg	ttccatcatc	tgtgctgtgc	actgggatca	gagactccac	180
gccccatgt	acatcctgct	cgccaacttc	tccttcttgg	agatatgtta	tgtcacctcc	240
acagtcccca	gcagctggc	caacttcctc	tctgacacca	agatcatctc	gttctctggc	300
tgcttctcc	agttctactt	tttcttctcc	ttgggctcta	cagaatgctt	tttctctggc	360
gttatggcat	ttgatcgata	ccttgccatc	tgtcggcctc	tacgtatcc	aaccattatg	420
accagacgtc	tctgtacca	tcttgtggtc	aattgctggg	tacttggttt	catctgggtc	480
ttgattccta	tctgcaacat	ctcccaaagt	tccttctgtg	gatctaggat	tattgaccac	540
ttcctatgtg	accagctcc	tcttctaact	ctcacttgca	aaaaaggccc	tgtgatagag	600
cttgtctttt	ctgtcttaag	tcctctgcct	gtctttatgc	tctttctctt	cattgtgggg	660
tcctatgctc	tggtcgtgag	agctgtgttg	agggtccctt	cagcagctgg	gagaagaaag	720
gctttctcca	ccctgtgggtc	tcacctggct	gtgggttcac	tggtctacgg	ctcagtactg	780
gtcatgtatg	ggagcccacc	atctaagaat	gaagctggaa	agcagaagac	tgtgactctg	840
ttttattctg	ttgttaccac	actgcttaac	cctgtgatat	atagtcttag	gaacaaagat	900
atgagaaaag	ctctgaagaa	attttgggga	aca			933

<210> 551

<211> 977

<212> DNA

<213> Unknown (H38g400 nucleotide)

<220>

<223> Synthetic construct

<400> 551

acagccctgg	aattcacaaa	caattcagag	acaagcacta	tgacggaatt	tgttctcctt	60
ggctttctctg	gttgtcagga	gatgcaaagt	ttcctcttct	ccctgttctt	tgtgatctat	120
gtatttacca	taataggaaa	tgggaccatt	gtctgtgctg	tgagattgga	caaacggctt	180
cataccceaa	tgtatattct	cctagggaac	tttgctttcc	ttgaaatccg	gtaagtact	240
tccactgtac	ccaacatgct	agtcaacttc	ctctcagaga	caaaaaccat	ctcttttgtt	300
ggctgtttcc	tccagttcta	cttttttact	tccttggtga	caatagaagc	atacttcttc	360
tgcatcatgg	catatgatcg	gtaccttgct	atctgccgcc	cattgcacta	cccaaccatc	420
atgaccccac	aactctgcta	catattgatg	tctttttgct	gggtgtttgg	attcctcagt	480
tactctgtct	ccactgtgca	actgtctcaa	ctgctttctt	gtgggcccac	catcatcaat	540
cactttttgt	gtgacatgga	cccactgatg	gctctgtcct	gtgcctcagc	tcctatcact	600
gagattatct	tctatatact	gagctccctc	attatcattc	tcactcttct	gtacatctgt	660
ggctcctata	tgttttactg	atagctgtat	taaaagtccc	ttcagcagct	ggccagcaga	720
aggccttttc	cacctgtgga	tctcatctga	cagtgggtgtg	tttattcttt	ggggccctac	780
tggcaatgta	tgtgagcccc	acaactgata	acccagctgc	aatttagaag	attataactt	840
tgttctattc	tgtggtgacc	cccttcttaa	acccctgat	ttacagctta	cgaaacaaag	900
agatgaaggc	tgcgttgaag	aaagtcttga	ggatagaatg	agaataaagt	catctacatg	960
agaccaagca	aaccatt					977

<210> 552

<211> 945

<212> DNA

<213> Unknown (H38g401 nucleotide)

<220>

<223> Synthetic construct

<400> 552

atggagagcg	gaaaccaatc	aacagtgact	gaatttatct	tacttgatt	ccctcagctt	60
caggatggta	gtctcctgta	cttctttcct	ttacttttca	tctatacttt	tattatcatt	120
gataacttat	taatcttctc	tgctgtaagg	ctggacaccc	atctccacaa	ccccatgtat	180
aattttatca	gtatattttc	ctttctggag	atctgggtaca	ccacagccac	cattcccaag	240
atgctctcca	acctcatcag	tgaaaagaag	gccatctcaa	tgactggctg	catcttgag	300
atgtatttct	tccactcact	tgaaaactca	gaggggatct	tgctgaccac	catggccatt	360
gacagatacg	ttgccatctg	caacctctct	cgctatcaaa	tgatcatgac	cccccggtc	420
tgtgtcaac	tctctgcagg	ttcctgcctc	ttcggtttcc	ttatcctgct	tcccagagatt	480
gtgatgattt	ccacactgcc	tttctgtggg	cccaaccaa	tccatcagat	cttctgtgac	540
ttggtcctcg	tgctaagcct	ggcctgtaca	gacacgtcca	tgattctgat	tgaggatgtg	600
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gtcactgtga	tattgaggat	tccctcttct	gaagggaggc	aaaaggcttt	ttctacctgt	720
gcaggccacc	tcatgggtctt	cctgatattc	tttggcagtg	tatcactcat	gtacttgctg	780
ttcagcgaca	cttatccacc	agttttggac	acagccattg	cactgatgtt	tactgtactt	840
gtccattctt	tcaatcccat	catttatagc	ctgagaaaca	aggacatgaa	caatgcgatt	900
aaaaaactgt	tctgtcttca	aaaagtgttg	aacaagcctg	gaggt		945

<210> 553

<211> 921

<212> DNA

<213> Unknown (H38g402 nucleotide)

<220>

<223> Synthetic construct

<400> 553

atgcattttg	tgactgagtt	tgtcctcctg	ggtttccatg	gtcaaagggg	gatgcagagc	60
tgctttctct	cattcatcct	ggttctctat	ctcctgacac	tgctagggaa	tggagctatt	120
gtctgtgcag	tgaaattgga	caggcggtc	cacacacca	tgtacatcct	tctgggaac	180
tttgcttttc	tagagatctg	gtacatttcc	tccactgtcc	caaacatgct	agtcaatata	240
ctctctgaga	ttaaaacat	ctccttctct	ggttgcttcc	tgcaattcta	tttctttttt	300
tactgggta	caacagagtg	tttcttttta	tcagttatgg	cttatgatcg	gtacctggcc	360
atctgtcgtc	cattacacta	cccctccatc	atgactggga	agttctgtat	aattctggtc	420
tgtgtatgtc	gggtaggcgg	atttctctgc	tatccagtc	ctattgttct	tatctcccaa	480
cttcccttct	gtgggcccac	catcattgac	cacttggtgt	gtgaccagc	cccattgttt	540
gcactggcct	gcattctctg	tccttccact	gagcttatct	gttacacct	caactcgatg	600
attatctttg	ggcccttctc	ctccatcttg	ggatcttaca	ctctgggtcat	cagagctgtg	660
ctttgtattc	cctctgggtc	tggtcgaact	aaagctttct	ccacatgtgg	gtcccaccta	720
atggtggtgt	ctctattcta	tggaaacctt	atggtgatgt	atgtgagccc	aacatcaggg	780
aaccagcag	gaatgcagaa	gatcatcact	ctggtataca	cagcaatgac	tccattctta	840
aatcccccta	tctatagtct	tcgaaacaaa	gacatgaaag	atgctctaaa	gagagtcctg	900
gggttaacag	ttagccaaaa	c				921

<210> 554

<211> 768

<212> DNA

<213> Unknown (H38g403 nucleotide)

<220>

<223> Synthetic construct

<400> 554

atgtataatt	ttatcagcat	tttctcattt	ctggagatct	ggtacacaa	tgccacaatt	60
cccaagatgc	tctccatcct	catcagcagg	cagaggacca	tctccatggt	tggtgcctc	120

ttgcagatgt	acttcttcca	ttcactggga	aattcagagg	ggattttgtt	gaccaccatg	180
gccattgata	ggtacgttgc	catctgtaac	cctctccgct	acccaacccat	catgaccccc	240
gggctctgtg	ttcagctctc	tgtgggggtcc	tgcattctttg	gctttcttgt	gttgctccca	300
gagattgcat	ggatttccac	actgcccttc	tgtggaccca	accaaatacca	ccagatcttc	360
tgtgattttg	aacctgtgct	gcgcttgcc	tgtacagaca	cgtccatgat	tctgattgag	420
gatgtgatcc	atgctgtggc	cattgtattc	tctgtccctga	ttattgccct	ttcttatatc	480
agaatcatca	ctgtaatcct	gaggattccc	tctgttgaag	gccgccagaa	ggccttttct	540
acctgtgccg	cccattcttag	tgtctttctg	atgttctatg	gcagtgtatc	cctcatgtac	600
ctgcgtttct	ctgccacttt	cccaccgatt	ttggacacag	ctgttgcaact	gatgtttgca	660
gttcttgctc	cctttttcaa	ccctatcatc	tatagcttta	gaaataagga	catgaagatt	720
gcaattaaaa	agcttttctg	ccctcagaag	atgggttaatt	tatctgta		768

<210> 555

<211> 960

<212> DNA

<213> Unknown (H38g404 nucleotide)

<220>

<223> Synthetic construct

<400> 555

agtctgggaa	gcatgaataa	ctcacagata	tctactgtga	cgcagtttgt	gttggtgggg	60
tttcttggtc	cctggaaaat	tcagatcatc	ttttctcaa	tgattttgtt	ggtctacatc	120
ttcactctga	ctgggaatat	ggccatcatc	tgtgcagtga	ggtgggacca	tcgactccat	180
acccctatgt	acgtgctcct	agccaacttc	tccttctctag	agatctggta	tgtgacctgc	240
acagtcccca	acatgctggg	aaattttttc	tccaaaacta	agaccataatc	attctctgga	300
tgtttcactc	agttccactt	cttctttttc	ctgggcacaa	ctgaatgctt	cttctctgtt	360
gtcatggcct	atgatcggtg	cctggccatc	tgccacccac	tgcaactatcc	ctccattatg	420
actggccagc	tctgtggcat	cttgggtgtc	ctttgttggc	tcattgggtt	ccttggacat	480
tcaatttcca	ttttcttcat	ttttcaacta	cctttctgtg	gtcccaacat	cattgatcat	540
tttctgtgtg	atgtagacct	actgatggca	ttgtcctctg	cccctactca	catcataggg	600
catgtgttcc	attctgtgag	ctctcttttc	atcaacctca	ccatgggtga	catccttggg	660
tcctatacct	tggtgctcag	aactgtgctt	taggttcctt	cttcagctgg	atggcaaaag	720
gccatctcta	cctgtgggtc	acacttgggt	gttgtgtctc	tggtctatgg	agccataatg	780
ctgatgtatg	tgagtccac	acctggcaac	tcagttgcta	tgcataagct	catcacactg	840
atatattctg	tggtaacacc	tgtcttaaac	cccctcatct	acagcctacg	caacaaggac	900
atgaaatatg	ccctccatca	tgtcttctgt	ggaatgagaa	ttatccagag	atcatgaata	960

<210> 556

<211> 957

<212> DNA

<213> Unknown (H38g405 nucleotide)

<220>

<223> Synthetic construct

<400> 556

atggatccag	agaatcagac	aatgggtgact	gagttttatt	tctctgattt	tcctcaatct	60
aagaatggca	gcctcttatt	cttcattcct	atgctcttta	tttatatatt	cattcttgtt	120
ggaaatttca	tgattttctt	tgctgtccaa	ccggaccccc	atctccataa	tcctatgtac	180
agttttatca	gtgtcttctc	cttcttgagg	atttgggtaca	ccaccgtgac	tatccccaag	240
atgctctcca	accttctcag	tgaacagaaa	accatctctt	tcatagggtg	cctcctgcag	300
atgtacttct	tccactcact	cggggtcaca	gaagccctag	tcctcacagt	gatggccatt	360
gacaggtgtg	tagccatctg	caacccctt	cgctatgcaa	tcactatgtc	cccttgactg	420
tgcatccagc	tctccactgg	ctcttgcatt	tttggcttcc	tcattgttact	gccagagatt	480
gtgtgcattt	ccactcttcc	attctgtggc	gccaaacaaa	ttcatcaact	cttttgtgac	540
tttgaacctg	tgctgcagtt	agcctgcaca	gatacgtaca	taattctggg	tgaagatgtg	600
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atcacggtga	tcctgaggat	tcctcttggt	gagagtctgc	agaaggcttt	cttcacatgt	720
gcagcccaca	ttgctatttt	cttgcctgtt	tttggcagtg	tgctactcat	gtatctgcgc	780
ttctctgtca	cattcccacc	attactggac	aaggccattg	cactgatgtt	tgctgtcctt	840

gccctacttt tcaaccagc aatctatagt ctgaggaaca aagatatgaa aaacgccacc 900
aagaaaatcc tctgttctca aaagatgttc aatgcctctg ggagctaata gagttca 957

<210> 557
<211> 951
<212> DNA
<213> Unknown (H38g406 nucleotide)

<220>
<223> Synthetic construct

<400> 557
atgacacagt tgacggccag tgggaatcag acaatgggtga ctgagttcct cttctctatg 60
ttcccgcatg cgcacagagg tggcctctta ttctttatcc ccttgcttct catctacgga 120
tttatcctaa ctggaaacct aataatgttc attgtcatcc aggtgggcat ggccctgcac 180
acccttttgt atttctttat cagtgtcctc tccttcctgg agatctgcta taccacaacc 240
accatcccca agatgctgtc ctgcctaate agtgagcaga agagcatttc cgtggctggc 300
tgctcctctg agatgtactt ttccactca cttgggtatca cagaaagctg tgcctgaca 360
gcaatggcca ttgacaggta catagctatc tgcaatccac tccgttacc aaccatcatg 420
attcccaaac ttgttatcca gctgacagtt ggatcctgct tttgtggctt cctccttggtg 480
cttcctgaga ttgcatggat ttccaccttg cctttctgtg gctccaacca gatccaccag 540
atattctgtg atttcacacc tgtgctgagc ttggcctgca cagatacatt cctagtgggtc 600
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ttttccacct gtgctgctca ccttgctgtg ttcttgctat tttttggcag tgtggctgtc 780
atgtatttga gattctcagc cacctactca gtgttttggg acacagcaat tgctgtcact 840
tttgttatcc ttgctccctt ttccaacccc atcatctata gcctgaaaaa caaggacatg 900
aaagaggcta ttggaaggct ttccactat cagaagaggg ctggttgggc t 951

<210> 558
<211> 831
<212> DNA
<213> Unknown (H38g407 nucleotide)

<220>
<223> Synthetic construct

<400> 558
atggctctaa ttggaaacct atccatgatt cttctcatct tcttggacac ccatctccac 60
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attgttccca agatggcatc tgattttctg tctggtaaca agtctatctc ctccactggg 180
tgtgggattc agagtttctt cttctcggca ttaggagggt cagaagcact acttttggca 240
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agcaaaagaa tgtgtgtgct gatgataaca gggctcttgg tcataggctc gatcaatgct 360
tgtgtctaca ctgtatatgt actccatatt ccttattgcc aatccagggc catcaatcat 420
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ggcacagtgt ttttgagcac caccatcttt ctggtgttcc ccttcattgc tatttcatgt 540
tcctatggcc ggggtctcct tgctgtctac cacatgaaat ctgcagaagg gaggaagaaa 600
gcctacctga cctgcagcac ccacctact gtagtaactt tctactatgc accttttgtc 660
tacacttatc tacgtccaag atccctgcga tctccaacag aggacaaggt tctggctgtc 720
ttctacacca tcctacccc aatgctcaac ccatcatct atagcctgag gaacaaggag 780
gtgatggggg ccctgacacg agtgagtcag agaattctgt ctgtgaaaat g 831

<210> 559
<211> 725
<212> DNA
<213> Unknown (H38g408 nucleotide)

<220>
<223> Synthetic construct

<400> 559

atggatagag	taaataattc	tgcggtatct	aaatttgtat	tgattggact	ttcaagctct	60
tgggagatgc	atctttttct	tttttgggtc	ttctctgtgt	tctacatggg	aattatcctg	120
gaaaatctct	tcatttgtgt	cacagtaatt	attgactctc	atttaaattc	cccagggtact	180
gcctactggc	caacatttat	cttcttgatc	tgggtctctc	cctacagtcc	tgactttttc	240
actaactgca	gcatcatttc	ttttccaaga	tgcatagata	agatattttt	catttgtgtc	300
atgctgtaaaa	attgagatgg	tgtctgctcat	aaccatggca	tagagcaggt	acactgccaa	360
tctgtaagcc	tccccattac	ctgaccacaa	tgaaccccaa	aatgtgtgtt	tcctttgttg	420
gaggcatcct	ggatagtcag	gataatccat	gctgtatctc	agtttgtttt	tgccataaac	480
ttgccttttt	gtggccctaa	tagagtaggt	agttttcact	gtgattttcc	ttatgtcatg	540
aaacttgctt	gtgtagatac	ttacaaaacta	gaggtttag	tcactgctaa	cagtgggctt	600
atatccatag	ctacctgttt	cttattaata	atatcctata	ttttcatttc	ggtaaccgtc	660
tagaatcctt	cttcaggaga	cttatctaaa	gcatttgtgt	catgttagat	cacatcacag	720
taggg						725

<210> 560

<211> 936

<212> DNA

<213> Unknown (H38g409 nucleotide)

<220>

<223> Synthetic construct

<400> 560

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ggaaaactgc	tgatattcct	ggtgggtctg	ctggactccc	ggcttcacac	acccatgtac	180
cactttgtca	gcattctctc	cttctcagag	cttggctata	cagctgccac	catccctaag	240
atgctggcaa	acttggtcag	tgagaaaaag	accatttcat	tctctgggtg	tctcctgcag	300
atctatttct	ttcactccct	tggagcgact	gagtgtctatc	tcctgacagc	tatggcctac	360
gataggatt	tagccatctg	ccggccctc	cactacccaa	ccctcatgac	cccaacactt	420
tgtgcagaga	ttgccattgg	ctggtgggtg	ggaggcttgg	ctgggccagt	agttaaatt	480
tccttgattt	cacgcctccc	attctgtggc	cccaatcgca	ttcagcacgt	cttttgtgac	540
ttccctctctg	tgtgtagttt	ggcttgcact	gatacgtcta	caaagtgcct	agtagatttt	600
gttataaatt	cctgcaagat	cctagccacc	ttcctgtctga	tcctctgctc	ctatgtgcag	660
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cggctgaaga	agagctactc	actggactat	gaccaggccc	tggcagtggg	ctactcagtg	840
ctcacaccct	tcctcaaccc	cttcactctac	agcttgacaa	acaaggagat	caaggaggct	900
gtgaggaggc	agctaaagag	aattggggata	ttggca			936

<210> 561

<211> 635

<212> DNA

<213> Unknown (H38g410 nucleotide)

<220>

<223> Synthetic construct

<400> 561

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ccacaatcaa	gaattggcct	tttcgtattc	accctcattt	ttctcatttt	cctaattggct	120
ctaattggaa	atctatccat	gattcttctc	atcttttttg	acatccatct	ccacacacct	180
atgtatttcc	tacttagtca	gctctccctc	attgacctaa	attacatctc	caccattgtt	240
ccaaagatgg	tttatgattt	tctgtatgga	aacaagtcta	tctccttcac	tggatgtggg	300
attcagagtt	tcttcttctt	gacttttagca	gttgacagaag	ggctgtctct	gacatcaatg	360
gcctatgata	gttatgtggc	catttgcttt	cctctccact	atcccatccg	tataagcaaa	420
agagtgtgtg	tgatgatgat	aacaggatct	tggatgataa	gctctatcaa	ctcttgtgct	480
cacacagtat	atgcactctg	tatcccatat	tgcaagtcca	gagccatcaa	tcattttttc	540
tgtgagggat	cctctgagag	gtacctggga	gcatacaagc	ttggcgctgg	gccgcgggtg	600
aaacggcgtg	actgggtaaa	ccctggggcg	gccca			635

<210> 562
 <211> 789
 <212> DNA
 <213> Unknown (H38g411 nucleotide)

<220>
 <223> Synthetic construct

<400> 562
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 gaagtatgcc gtatcctatt tgcgaccttc ttctcttgt atgcagtgc agtgatggga 120
 aacgtgggtca tcatcatcac tgtctgtgtt gataaatgtc tgcagtcctc catttatttt 180
 ttcttgggccc acctctgtgt cctggagatc ctgatcacat ccaccgctgt cctttttatg 240
 ctctgggggt tgcctgcttc aagcaccag atcatgtctt tgacagcctg tgcctgcacag 300
 ctatatttat acctttcttt gggctacctt gagttggcat taatgggagt gatggctgtg 360
 gaccgttatg tggctgtgtg taacctttt aggtacaaca tcattatgaa cagcagcacc 420
 ttcatattggg tgataattgt gtcattgggt ttgggggttc ttctgaaat ctggccagtt 480
 tatgccactt ttcagcttac ttctgcaaa tcaagtgtgt tagatcattt ttattgtgac 540
 cgaggacaat tgcctcaagg atcctgtgag gacactctt tcagagagtt tattcttttt 600
 ctaatggctg ttttcattat cattgggtct ttgatcccta cgattgtctc ctacacctac 660
 atcatctcca ccaacctcaa gattccgtca gcctctggct ggaggaaatc cttttccacc 720
 tgtgctctcc acttcaccta tgttgtgatt ggctatggca gctgcttgtt tctctacgtg 780
 aaaccaag 789

<210> 563
 <211> 951
 <212> DNA
 <213> Unknown (H38g412 nucleotide)

<220>
 <223> Synthetic construct

<400> 563
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 ggctatgtca gggctggct ttttgtctg ctgctattgg caccctgtt caccatctgt 120
 ggtaacatgc tcatcttctc agtcaccca ctggatgcag ctctgcacac acctatgtac 180
 cactttgtca gtgttcttct cttcttggag ttgtggtata cagctaccac tatccctaag 240
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 gatagatacc tggccatttg tcggcccttc cactacccta taattatgac caccacactc 420
 tgtgccaaaga tggctgctgc ttgttggact tgtggtctcc tctgtgagtc 480
 atccttgctt cccagctccc attttgtgt tacaatgaaa tccaacacat tttctgtgac 540
 ttccacactt tgcctgagctt ggcctgcaag gacacatctg ctaacattct ggtggacttt 600
 gccattaatg ctcttcataat tcttatcact ttcttcttta tcatgatttc ttatgcaagg 660
 atcattgggg ctgtgctgaa gataaaaaca gcatcaggaa gaaagaagge cttttctacc 720
 tgtgctcac atcttgcctg ggtcctcctc ttcttggga gcatcatctt catgtatgtg 780
 cggctaaaaga agagctatc cctgacctt gaccgaacac ttgctatagt ttactccgta 840
 ctaacaccaa tgggtcaatcc aattatctac agtcttcgta acaaggaaat cattaaagct 900
 atcaagagga ccatcttcca gaaggagat aaagctagtc ttgctcatct t 951

<210> 564
 <211> 945
 <212> DNA
 <213> Unknown (H38g413 nucleotide)

<220>
 <223> Synthetic construct

<400> 564
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ccccacctcc agctgatgct ctctctgctg ttctctgctga tgtacctgtt cactgctgctg 120
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gtcctcacac ccttcctcag ccccatcctc ttcagcctca ggaacaagga gctgaaggtc 900
gccatgaaga agacttgctt caccaaactc tttccacaga actgc 945

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<210> 565

<211> 958

<212> DNA

<213> Unknown (H38g414 nucleotide)

<220>

<223> Synthetic construct

<400> 565

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gatccagaac tgcagcctgt cctcgctggg ctgtcccat ccatgtatct ggtcacagt 120
ctgagggaacc tgctcgctcat cctggctgtc agctctgact cccacctcca ccccccatg 180
tacttcttcc tctccaaccc gtgctgggct gacatcggtt tcaactcggc cactggtccc 240
aagatgactg tggacatgca gtcacatata agagtcactt cttatgcgag ctgcctgaca 300
cggatgtctt tcttggtcct ttttgcatgt atagaagaca tgctcctgac tgtgatggcc 360
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aattgttccc tccattctaa ggatttcata gtcagatggg aagtataaag ctttctccac 720
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gacttcagct gtggcaccac cccccaggaa tgggtgtggt gcgtcagtga tgtacgctgt 840
ggtcaccccc atgctgaacc ctttcataca cagcctgaga aacagggaca ttcaaagcgc 900
cctgtggagg ctgcgcagca gaacagtcga atctcatgat ctgttccatc ctttttct 958

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<210> 566

<211> 470

<212> DNA

<213> Unknown (H38g415 nucleotide)

<220>

<223> Synthetic construct

<400> 566

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gactcagttt tctgtctggt tcacagtgtg ggctgctgca cactacttct ttcacagagt 120
ttgcggcttc tttcagtttt cctgttaagt tctgtgctg cttcttgga aaaagtccac 180
agcatgaatc tctacacacc attttgtctt tctaagtgg agaatacagt taacaatgcc 240
ttcaacctgc catcatggaa aaaaagtaaa agtgtggtca ccatgttcta agggcccgcc 300
atgatcacgt acttgaggtc tgactcctag tataacctac agtgggaaaa cagttggtgc 360
tgtttacag cattgtctct gccttcataa aacctcatcat ctccagcctc aggaacaagg 420
atgtaaaagg ggcttcttgg aaagtactta gagtcaaagg gacagctcaa 470

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<210> 567

<211> 862
 <212> DNA
 <213> Unknown (H38g416 nucleotide)

<220>
 <223> Synthetic construct

<400> 567

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agaattgacc	ttttcttctt	cattctcttt	gttctcattt	tcttgatggc	tctaattgga	120
aacctatcca	tgattcttct	catcttcttg	gacacccatc	tcacacacac	catgtatttc	180
ctgcttagtc	agctctccct	cattgacct	aattacatct	ctacgattgt	tcctaagatg	240
gcttctgatt	ttctgtatgg	aaacaagtct	atctccttca	ttgggtgtgg	gattcagagt	300
ttcttcttca	tgacttttgc	aggtgcagaa	gcgctgctcc	tgacatcaat	ggcctatgat	360
cgttatgtgg	ccattttgctt	tcctctccac	tatcccatcc	gtatgagcaa	agaatgtat	420
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tatgcattcc	gtatcccata	ttgcaagtcc	agagccatca	atcatttttt	ctgtgatgtt	540
ccagctatgt	tgacattagc	ctgtacagac	acctgggtct	atgagtacac	agtgtttttg	600
agcagcacca	tctttcttgt	gtttcccttc	actggcattg	cgtgttccta	tggctgggtt	660
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gcaccacact	cactgtagta	actttctact	atgcaccctt	acgttatacc	tatctatgtc	780
caagatccct	gtttatttct	gacagaggac	aaggttgggg	gggggggggt	acaccatcct	840
cacctcaatg	ctcaacccca	tc				862

<210> 568
 <211> 930
 <212> DNA
 <213> Unknown (H38g417 nucleotide)

<220>
 <223> Synthetic construct

<400> 568

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cctcagatgg	agatcatctt	cttcgtggtc	ttcctcatag	tttacctggt	taatgtagtg	120
gggaatattg	gtatgattat	cctgattaca	acagacactc	agcttcacac	acccatgtat	180
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tgcttggctc	tcattgctgg	ctcttacctg	gctgggtctag	tgagttagt	agccacact	480
accctcacct	tcagctgag	ttactgtggt	tccaatatca	tcaatcattt	cttctgcgaa	540
atcccaccac	tcttggccct	ctcttgctca	gacacctaca	tcagttagat	cttgtctctc	600
agtctgtgtg	gcttcattga	attcagcacc	atcctcatca	tcttcattctc	ctataacctt	660
atccttggtg	caatcatcag	aatgcgttca	gctgaaggcc	gccttaaggc	tttctccacc	720
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aggccaacat	ccagctactc	cctggaccaa	gacaagtggg	cctctgtgtt	ctacacgggt	840
atcatcccca	tgttaaatcc	cttgatctac	agtttgcgga	acaaggatgt	gaaagctgct	900
ttcaaaaagc	taattggaaa	aaaatctcaa				930

<210> 569
 <211> 1005
 <212> DNA
 <213> Unknown (H38g418 nucleotide)

<220>
 <223> Synthetic construct

<400> 569

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atccagaacg	gcagctggtc	cttgctgggc	tgttcctgtc	catgtgctctg	gtcacgggtc	120

tggggaacct	gctcatcatc	ctggccgtca	gtcctgactc	ccacctccac	acccccatgt	180
acttcttcct	ctccaaacct	tcttgcctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccga	tctcacagca	gagtcattct	ctatgcaggc	tgcttgactc	300
agacgtctct	ctttgccatt	tttggaggca	tggaagagag	acatgctcct	gagtgtgatg	360
gcctatgacc	agttttagc	catctgtcac	cctctatata	attcagccgt	catgaacct	420
tgtttctgtg	gctttctagt	tttgttgact	tttttttttc	tcagtctttt	agacgcccag	480
ctgcacaact	tgattgcctt	acaaatgacc	tgcttcaagg	atgtggaaat	tcctaatttc	540
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atcatgtatt	tccctgctgc	catatttggt	ttcttcccca	tctcggggac	ccttttctct	660
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aaaagtgtcc	tgcggtggct	gcacggcagc	tctgtctaat	ctcaacatct	tcttatctgt	960
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<210> 570

<211> 907

<212> DNA

<213> Unknown (H38g419 nucleotide)

<220>

<223> Synthetic construct

<400> 570

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gggaacattc	tcatcattgt	cctgggtacag	ttagattctg	gactgttcac	gcccattgtac	180
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ctatgtcttt	cattccttag	ggatgactga	gtgctacctg	ctgggtgtca	tggcactgga	360
tagctacctt	atcatctgcc	acccactcca	ctaccacgca	ctcatgagca	gacagggtaca	420
gttacgacta	gctggggcca	gttgggtggc	tggtctctca	gctgcacttg	tgccagccac	480
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acctgggagt	cgacctgaga	gcacagacaa	gcttgttgcc	ttggtttatg	cccttattac	840
ccctttcctc	aatcctatca	tctatagcct	tcgcaacaag	gaggtgaaga	aggctttaag	900
gagagtc						907

<210> 571

<211> 1006

<212> DNA

<213> Unknown (H38g420 nucleotide)

<220>

<223> Synthetic construct

<400> 571

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gctggcaatg	tcataattgt	gacaattatc	agcattgatc	gtcaccttca	cacccccatg	180
tactttcttg	ttagtatgct	ttccacttca	gagactgtct	acacattagt	cattgtacca	240
cggatgctct	ccagtctctt	aagtctaagc	caacctatct	ctttgggtgg	ctgtgccacc	300
cagatgtttt	ttttattacc	ttggccatca	acaactgctt	tctgtctaca	gcaatgggggt	360
atgatcgcta	tgtggccatc	tgtaaccctt	tgaggtagat	gatcatcatg	aacaagaaag	420
tgtgtgtcca	gctgggtatg	gggtcctgca	gtgttgggct	gcttgtggcc	atagttcaga	480
tttcatctgt	gttcaggctg	cctttttgtg	ataaacaggt	ggcccattat	ttctgtgata	540
tccacccagt	tatgaaactt	tctgtgtgtg	ataccactct	acatgacctt	attaattttg	600

ttgttagttc	cctgggttatt	gtgggtgccgc	tgggttttgg	cttcatctcc	tacatcctca	660
tcattctctac	catcctcaag	gtcacctctc	ctgagggccg	gaaaaaggct	tttgcaactt	720
gtgcctccca	cctcactgtg	gttatcatcc	actatggctg	tgccctccatt	gcctacctca	780
agcccaagtc	agagaacacc	agggatcagg	accagcta	ttcagtgaca	tacaccgtct	840
ttactccact	acttaatcct	gttgtgtaca	ctttgaggaa	caaggaggtc	aagaatgccc	900
ttcaccgtgc	tattggcaaa	aaaccttttg	cctagaatct	tcattcagttt	gacatatagt	960
cagtcatagt	ctgggtatatt	ttttaagctc	gagaaaattg	aatcct		1006

<210> 572

<211> 945

<212> DNA

<213> Unknown (H38g421 nucleotide)

<220>

<223> Synthetic construct

<400> 572

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accctggcct	ggaacctggc	cctcattttt	ctgatcagag	gtgacacca	tctgcacaca	180
cccatgtact	tcttcctaag	caacttatct	ttcattgaca	tctgctactc	ttctgctgtg	240
gtcctccaata	tgctcactga	cttcttcttg	gagcagaaga	ccatatcatt	tgtgggctgt	300
gctgctcagt	tttttttctt	tgctggcatg	ggtctgtctg	agtgcctcct	cctgactgct	360
atggcatacg	accgatatgc	agccatctcc	agcccccttc	tctacccac	tatcatgacc	420
cagggcctct	gtacacgcct	ggtgggtggg	gcatatgttg	gtggcttctc	gagctccctg	480
atccaggcca	gctccatatt	taggcttcac	ttttgctggc	ccaacatcat	caaccacttc	540
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tatgggttaca	tagtgtctgc	ggtcctgaag	atcccttcag	cagagggccg	atggaaagcc	720
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gtgtacttgc	gacccagctc	cagctacttg	ctaggcaggg	acaagggtgg	gtctgttttc	840
tattcattgg	tgatccccat	gctgaacctt	ctcattttaca	gtttgaggaa	caaagagatc	900
aaggatgccc	tgtggaaggt	gttggaaggg	aagaaagtgt	tttct		945

<210> 573

<211> 949

<212> DNA

<213> Unknown (H38g422 nucleotide)

<220>

<223> Synthetic construct

<400> 573

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tcaacgggtg	ctggaaatgt	tataatcatc	actattatct	agatggaacc	tctcctccaa	180
acccccatgt	acttcttctc	cactaattta	tcctttcttg	acatttgcta	cacatccacc	240
aatgtcccc	aaatgctgtc	caacatggcg	gggaaaaaga	acaccatctc	attctccagc	300
tgctctactc	agatgtactt	ctccctctcc	tttggaatga	ttgtgtctctc	cttgggtgtca	360
tggcttatga	cagatatgta	gccatttgtc	atcctcttca	ttataccttc	attatggacc	420
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tatccacctg	tacctcccat	ttgacagtgg	taaccttatt	tatgggactg	ccatcttcat	780
ggacatgaga	ccacagtcga	ggtcctcctg	ggctggcggc	aagatcattg	cggttttcta	840
cacggtggtc	acacccatgc	ttaaccctt	gattttacagc	ctgaggaacc	aagatgtgaa	900
aggagctcga	aggagagcta	ttgcaaagca	gaggatgtga	cagctgtta		949

<210> 574

<211> 1022
 <212> DNA
 <213> Unknown (H38g423 nucleotide)

<220>
 <223> Synthetic construct

<400> 574
 atgccaaagc taaattccac ttttgtgact gagttcctct ttgaagggtt ctccagcttc 60
 aggcggcagc acaaacttgt cttctttgtt gtcttcctaa ctttgtacct gctgactctc 120
 tctggcaatg tgattatcat gaccattatt cgctggacc atcatcttca ccccccatg 180
 tacttcttcc tgtgcatgct atccatctct gagacctgct acactgtggc catcattccc 240
 catatgcttt ctggtctctt gaatcctcat cagccattg ccacccaaag ctgtgccact 300
 cagctcttct tctatctcac ctttggcatc aacaactgct tcctgctcac agtcatggga 360
 tatgaccgct atgtggccat ctgcaacccc ctaagggtatt cagtcacatc gggtaagagg 420
 gcctgtatcc aactggcctc tggatcactg gggattggcc ttggcatggc cattgtccaa 480
 gtaacatctg tgtttggcct gccattctgt gatgcctttg tcatctccca cttcttctgt 540
 gatgtgagac acctgctgaa gctggcctgc acagacacca ctgtcaatga gataatcaac 600
 tttgttgta ggcgtctgtt ccttgttcta cctatgggccc tggcttttat ctcctatgtc 660
 ctcatcatct ccaccattct taagattgcc tcagctgaag gtcagaagaa ggcctttgcc 720
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 ctgaagccta agtcccagag ttccctggga caggacagac tcactctcagt gacctacact 840
 catcactccc ctactgaacc ctgttggtga cagcctgaag aacaaggagg tcaaagatgc 900
 tctgcacaga gccgtggggc aaaaaactct gtctccttaa tgaagagagg ttgtgaaggc 960
 ttttcctttg cgtttataaa tatgtactaa tttttaatgc tctttcaata atgcccttat 1020
 gt 1022

<210> 575
 <211> 938
 <212> DNA
 <213> Unknown (H38g424 nucleotide)

<220>
 <223> Synthetic construct

<400> 575
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 ataggggtcc caggcattca tgagtggcag cactggctct ccctgccctt agctcttggt 120
 gccaatctcc tcatcataat caccattcaa catgagacca tgctacatga acccatgtac 180
 catttgctgg gcatattagc agtgggtggc atttggcctg ccaccaccat catgcccagg 240
 atcctggcca tcttctgggt tgatggcaag gccatcagcc tccctgagtg ttttgctcag 300
 atctatgcca tccactcttt catgtgcatg gagtcaggca tcttccctctg catggcagtg 360
 gatagatata tggccatttg ttatccctct cagtacactt ccatagttac tgaagctttt 420
 gtcacaaag ccacactgtc agtagtgctc aggaatggcc tgttgaccat cccagtggca 480
 gtattggctg cccagcgaca ctactgtctc aggaatgaga ttgatcagtg cctctgctct 540
 aacttggggg tcacaagtct ggctgtgat gacaccacta ttaacaggtt ttaccagctg 600
 gccttggtct ggggtgtggt tgggagtgc atgggtctgg tctttgcttc ctattctttg 660
 attattcact cagtgtgaa gctgaactct gctaaagcaa catctaaggc cctgaatacc 720
 tgcagctccc acctatctc cattctcttt ttctacacag ctattattgt agtatctgtc 780
 accacctggc aggaagaagg gctccccgca tccctgttct cctcaatgtg ctgcatattg 840
 tcatccctc agcccttaac cccatagtat atgcccttag gacctaggag ctgagagcgg 900
 gttccagaa gctgcttggt ttgggcgagt atgtgtcc 938

<210> 576
 <211> 945
 <212> DNA
 <213> Unknown (H38g425 nucleotide)

<220>
 <223> Synthetic construct

<400> 576

atgtttctccc	caaaccacac	catagtgaca	gaattcattc	tcttgggact	gacagacgac	60
ccagtgcctag	agaagatcct	gtttggggta	ttccttgcca	tctacctaat	cacactggca	120
ggcaacctgt	gcctgaccc	gctgacagg	accaattccc	acctgcaaac	acctatgtat	180
ttcttccttg	gccacctctc	ctttgtagac	atttgctatt	cttccaatgt	tactccaaat	240
atgctgcaca	atttcctctc	agaacagaag	accatctcct	acgctggatg	cttcacacag	300
tgtcttctct	tcctgcctct	ggtgatcact	gagttttaca	tccttgcttc	aatggcattg	360
gacgctatg	tagccatttg	cagccctttg	cattacagtt	ccaggatgtc	caagaacatc	420
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gacctcctc	ttatcatgct	ggcctgctct	gacaccctg	tcaaaaagat	ggcaatgttt	600
gtagttgcag	gctttaatct	ctcaagctct	ctcttcata	ttcttctgtc	ctatcttttc	660
atctttgcag	cgatcttcag	gatccgttct	gctgaaggca	ggcacaaaagc	cttttctacg	720
tgtgcttccc	acctgacaat	agtcactttg	ttttatggaa	ccctcttctg	catgtacgta	780
aggcctccat	cagagaagtc	tgtagaggag	tccaaaataa	ctgcagctct	ttatactttt	840
ttgagcccaa	tgtgtaacct	attgatctat	agcctacgga	acacagatgt	aatccttgcc	900
atgcaacaaa	tgattagggg	aaaatccttt	cataaaattg	cagtt		945

<210> 577

<211> 771

<212> DNA

<213> Unknown (H38g426 nucleotide)

<220>

<223> Synthetic construct

<400> 577

atgtttctac	tgttggccat	cctggcagcc	acagacctgg	gcttagccac	atctatagcc	60
ccagggttgc	tggctgtgct	gtggcttggg	ccccgatctg	tgccatatgc	tgtgtgcctg	120
gtccagatgt	tctttgtaca	tgcactgact	gccatggaat	cagggtgtgt	tttggccatg	180
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gcctgtgtgg	gttatgcagc	cttggccctg	gcactgaaag	ctgtggctat	tgttgtacct	300
ttcccaactgc	tgggtggcaaa	gtttgagcac	ttccaagcca	agaccatagg	ccatacctat	360
tgtgcacaca	tggcagtggt	agaactgggt	gtgggtaaca	cacaggccac	caacttatat	420
ggtctggcac	tttcaactggc	catctcaggt	atggatattc	tgggtatcac	tggctcctat	480
ggactcattg	cccatgctgt	gctgcagcta	cctaccgggg	aggcccatgc	caaggccttt	540
ggtacatgta	gttctcacat	ctgtgtcatt	ctggccttct	acatacctgg	tctctctccc	600
tacctcgcac	accgctttgg	tcatacaact	gtcccaaaagc	ctgtgcacat	ccttctctcc	660
aacatctact	tgtgtgtgcc	acctgccttc	aacccctca	tctatggggc	ccgcaccaag	720
cagatcagag	accgactcct	ggaaaccttc	acattcagaa	aaagcccgtt	g	771

<210> 578

<211> 1074

<212> DNA

<213> Unknown (H38g427 nucleotide)

<220>

<223> Synthetic construct

<400> 578

gtgagcatga	gcttcttaat	aagaagtgtat	tcaacactac	acactccaat	gtgcttgttc	60
ctcagtcata	tctcttttgt	agatctctat	tatgccacca	atgccactcc	tccgatgctg	120
gttaactttt	tttttccaag	agaaaaaccg	tttcttttat	tgggtgcttt	atccaatttc	180
accttttcat	tgcactgggt	atcacagatt	atcatatgct	cacagtgatg	gtgtatgacc	240
actacatggc	catctgcaag	cctttgttat	atggaagcaa	aatgtccagg	tgtgtctgcc	300
tctgtctcac	tgtgtctccc	tatatattat	gctctgcaaa	tgggtctggt	cagggtcatcc	360
tgatgctttg	tctgttcttc	tgtgaacca	atgagatcaa	ccactttttt	ttttttggag	420
aaaatgcatt	atatgcacat	ttaattccac	tataaatttt	tgaatggacg	gttggagagg	480
aaggggagaa	tacatatata	cggagagaat	accaccacga	aagtatatac	aatgggagaa	540
aggaacctgt	tgatccaagt	ttccatattc	ttattatggc	atataagggt	atgattatct	600
tctcagtatg	aagcatctcc	cagggctgac	tctgatgtaa	aattggagat	caaccacttt	660

tattatgcag	aaccacccct	cttagtcttc	gcctgcttgg	atacttatgt	caaagaaact	720
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tatatctttg	tgagtectac	gttaaaccac	ttgatctacc	gtctgaggaa	taaaaatgtt	1020
aaaagaacaa	taagggaagt	tatccaaaag	aaactgtttg	ctaagtaagg	taga	1074

<210> 579

<211> 937

<212> DNA

<213> Unknown (H38g428 nucleotide)

<220>

<223> Synthetic construct

<400> 579

atgtttggtg	ctaattctcac	caccttccat	cccactctat	tcatttctct	tggcatccca	60
ggactggagc	aataccacat	ctggcttttc	attcctttct	accttatgta	catcactgca	120
gtcttgggaa	atggagccct	catcctagtt	gtcctcagtg	aacacaccct	ccatgtcttc	180
ctatccatgc	tggctggcac	tgatatactg	ctatccacca	ccactgtgcc	taaggccttg	240
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ttcattcatg	ttgcctttgt	ggctgagtca	ggaatcctgc	tggccatggc	atttgacagt	360
tatgtagcca	tttgtactcc	cttgagatac	actaccatct	taacttctat	ggtaaattgga	420
aaaatgaccc	tgacaatctg	gggacaaagc	attgggacaa	tttttctctg	catatttctg	480
ctgaagaggc	tgccatactg	tcagaccaat	atcatccccc	actcatactg	tgagcacatt	540
ggggtggccc	aattggcctg	tgctgacata	actgtcaata	tctgggatgg	cttttcagtg	600
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ttcccccatg	cttaacccca	ttatctacgg	agagaagacc	aagcaaataca	gggacagtat	900
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<210> 580

<211> 941

<212> DNA

<213> Unknown (H38g429 nucleotide)

<220>

<223> Synthetic construct

<400> 580

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ggactgacta	gccagccaga	gctgcagcct	atgctctttg	tggatttcc	cctgatttac	120
ctcatcacc	tgactgggaa	atttgggatg	attttcttāā	tcagāttcac	tcctcagctc	180
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tgtccagagc	agtttgcatc	tgcctgggtga	ctttccccta	cttctggggg	tctatgggtg	480
gcacgatgca	agtaatactg	acctctcggt	tgtccttttt	tggacccaac	accatcaacc	540
attttctactg	tactgaccca	cccctcttaa	tgttgacatc	ttctgacact	tacataaaac	600
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aagccttctc	cacctgtggc	tcccacctga	cagctgtcac	tatgttctat	gggtccctat	780
tctgcatgta	cctgagacca	acaaatgagc	tgtctgttga	gcaagggaaa	atgggagtgg	840
tgttttgtat	ttttgtgagt	cccatgctga	acctgtttat	ctaccgcctg	agaaacaagg	900
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<210> 581

<211> 958
 <212> DNA
 <213> Unknown (H38g430 nucleotide)

<220>
 <223> Synthetic construct

<400> 581

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atcctgggat	tcacggatca	cccagaatta	cagtgtcttc	tttttgtgtt	gtttcttctc	120
atctatatgt	tcaccgttgt	tggaaatctt	ggcatgattc	tattaatcaa	gattgactca	180
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attaactatt	ttttttgtga	tattccaccc	ctcctgaaac	tcttgttctg	atacacacat	600
caatgaggtt	gtcattttttg	cctttgccag	ttttaatgaa	ttgagctgtc	tcctactgat	660
tcttgtttcc	tgtctctaca	tccttgctgc	catcttgaag	atccactctg	cagaagggag	720
gcacaaggcc	ttctccacct	gtgcttccca	cttggcggtg	gtcactatct	tctttgggac	780
aatcctgttc	atgtatctct	gcgtcccgag	tccagctact	caatggatca	agacaaagtg	840
gtgtctgtct	tacacagtag	tcaccccat	gttgaatcct	ttcatctata	gtttgagaaa	900
caaggaagtc	aaagcttctt	taagtaaaat	gtttaaaaca	gtctcttata	tctctact	958

<210> 582
 <211> 897
 <212> DNA
 <213> Unknown (H38g431 nucleotide)

<220>
 <223> Synthetic construct

<400> 582

atgggattac	caggcattca	tgagtggcag	cactggctct	ccctgccct	gactctgctc	60
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ctacatgaac	ccatgtacca	tttgcctggc	atattagcag	tggtggacat	tggcctggcc	180
accaccatca	tgcccaagat	cctggccatc	ttctggtttg	atgccaaggc	cattagcctc	240
cccatgtgtt	ttgctcagat	ctatgccatc	cactgcttct	tctgcataga	gtcaggcatc	300
tttctctgca	tggcagtaga	cagatacata	gccatctgtc	gccctcttca	gtacccctcc	360
atagtactca	aagcttttgt	cttcaaagcc	acagggttca	tcatgctcag	gaatggcctg	420
ttgaccatcc	cagtgcctat	actggctgcc	cagagacact	actgttccag	gaatgaaatc	480
gagcactgcc	tctgctctaa	cttggggggt	atcagcctgg	cttgtgatga	catcactgtg	540
aacaaatttt	accaactgat	gctagcatgg	gtcttgggtg	ggagtgatat	ggctctggta	600
ttttcttctc	atgctgtaat	ccttcaactc	gtgctgaggc	tgaactcagc	agaagcaatg	660
tccaaggctc	tgagcacttg	tagctcccat	ctcactctca	tcctcttcca	cacaggatct	720
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aatgtgctgc	acaatgtcat	ccccctgca	ctcaaccccc	tggcctgtgc	actcaggatg	840
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<210> 583
 <211> 951
 <212> DNA
 <213> Unknown (H38g432 nucleotide)

<220>
 <223> Synthetic construct

<400> 583

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atctatatgg caaacatggt gggcaatttg gggatgattg tattgattaa gattgatctc 180
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tcttcttccg tcaactccaa gatgctggtg aacctcatgg ctgagaataa ggccatttct 300
tttcatggat gtgctgcccc gttctacttc tttggctcct tcctggggac tgagtgttc 360
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gtctctgtct tttatacagt aataatccct gtgctaaatc cctcatcta tagtttaaaa 900
aataaggatg taaaaaaggc cctaaagaag atcttatgga aacacatctt g 951

```

<210> 584

<211> 951

<212> DNA

<213> Unknown (H38g433 nucleotide)

<220>

<223> Synthetic construct

<400> 584

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gtcctgggaa acagcatcct gatagtgggt attgtcatgg aacgtaacct tcatgtgccc 180
atgtatttct tcctctcaat gctggccgtc atggacatcc tgtgtgtctac caccactgtg 240
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acccaaggct tctttgtcca tatgatgttt gtgggggagt cagctatcct gttagccatg 360
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gtcatattct tgctgaagcg gctgcccttc tgccctaacca acattgttcc tcaactctac 540
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ctttatgtgg cagtgccacc aatgctgaac cccattgtct atgggtgtgaa gactaagcag 900
atacgtgagg gtgtagccca ccggttcttt gacatcaaga cttggtgctg t 951

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<210> 585

<211> 915

<212> DNA

<213> Unknown (H38g434 nucleotide)

<220>

<223> Synthetic construct

<400> 585

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aatagcacc tcactgtgtt gatctgtaat gactcctgcc tccacacacc catgtatttt 180
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gcattgctgg tagcagtctc atattgtggt ggctttatta actcttcaat catcaccaag 480
aaaacgtttt cctttaactt ctgccgtgaa aacatcattg atgacttttt ctgtgatttg 540
cttcccttgg tggagctggc ctgtggcgag aaggcggt ataaaattat gatgtacttc 600
ctgctggcct ccaatgtcat ctgccccgca gtgctcatcc tggcctccta cctctttatc 660

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atcaccagtg	tcttgaggat	ctcctcctcc	aagggctacc	tcaaagcctt	ctccacatgc	720
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cccagatcta	gctattcttt	tgatatggac	aaaatagttt	ctacatttta	cactgtggta	840
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aaaaaacttc	tccca					915

<210> 586

<211> 942

<212> DNA

<213> Unknown (H38g435 nucleotide)

<220>

<223> Synthetic construct

<400> 586

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ctgctaggca	actgtaccct	tctcttcatt	atccgggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcaacc	attgacttgg	ttctttcttc	tacaacgctg	240
cccaaaatgc	ttgccatatt	ctggttcagg	gatcaggaga	tcaacttctt	tgctgtctg	300
gtccagatgt	tcttccttca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	catctgcaag	ccattgcaat	acacgacggt	cctgactggg	420
tccctcatca	ccaagattgg	catggctgct	gtggcccggg	ctgtgacact	aatgactcca	480
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gtcttcaccc	ttcaggcagt	tctccagctt	gcctctcagg	aggcccgcga	caaggcattt	720
gggacatgtg	tgtctcacat	aggtgccatc	ctgtccacct	acactccagt	agtcactctc	780
tcagtcacgc	accgtgtagc	ccgccatgct	gcccctcgtg	tccacatact	ccttgctatt	840
ttctatctcc	ttttcccacc	catggctcaat	cctatcatat	atggagtcaa	gaccaagcag	900
atctgtgagt	atgtgctcag	tctattccag	agaaagaaca	tg		942

<210> 587

<211> 937

<212> DNA

<213> Unknown (H38g436 nucleotide)

<220>

<223> Synthetic construct

<400> 587

atgttaaaga	aaaaccatac	agccgtgact	gagtttgttc	tcctgggact	gacagatcgg	60
gctgagctgc	agtcctctct	ttttgtggta	tttctagtca	tctaccttat	cacagtaatc	120
ggcaatgtga	gcatgatctt	gttaatcaga	agtgactcga	cactacacac	tccaatgtac	180
ttcttctca	gtcacctctc	ctttgtagat	ctctgttata	ccaccaatgt	tactcctcag	240
atgctgggta	actttttatc	caagagaaaa	accatttctc	tcctcgggctg	ctttatccaa	300
tttcaacttt	tcattgcact	ggtgattaca	gattattata	tgctcacagt	gatggcttat	360
gaccgctaca	tgcccatctg	caagcccttg	ttatatggaa	gcaaaatgac	cagggtgtgtc	420
tgctctgtgc	tcgctgctgc	tccctatatt	tatggctttg	caaagtgtct	aagcacagac	480
caccctgatg	cttcgtctgt	ccttctgtgg	accaatgac	atcaaccact	tttactgtgc	540
ggaccacccc	ctcttagtcc	tcgcctgctc	agatacttat	gtcaaagaga	ccgccatggt	600
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catcttcact	gccattctgc	gtatccacac	tgctgagggg	aggcgcaagg	ccttctccac	720
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gaggcccccct	tctgagacat	ctatacaaca	ggggaaaatt	gtagctgttt	tttatatctt	840
tgtgagtcgc	atgttaaacc	cattgatcta	cagcctgagg	aataaagacg	ttaaaagaag	900
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<210> 588

<211> 942

<212> DNA

<213> Unknown (H38g437 nucleotide)

<220>

<223> Synthetic construct

<400> 588

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ctgcttgga	actgcactct	ccttctcatc	atccaggctg	atgcagccct	ccatgaaccc	180
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cccaaaatgc	ttgccatatt	ctgggttcagg	gatcgggaga	taaacttctt	tgccctgtctg	300
gcccagatgt	tcttccctca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	tatctgcaag	ccactgcact	acaccaagg	cctgactggg	420
tccctcatca	ccaagattgg	catggctgct	gtggcccg	ctgtgacact	aatgactcca	480
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atctttattc	ttcaggcagt	tctactgctt	gcctctcagg	aggcccgc	caaggcattt	720
gggacatgtg	tctctcatat	aggtgccatc	ttagccttct	acacaactgt	ggtcactctc	780
tcagtcatgc	accgtgtagc	ccgccatgct	ccccctcatg	tccacatcct	ccttgccaat	840
ttctatctgc	tcttcccacc	catggccaat	cccataatct	atgggtgtcaa	gaccaagcaa	900
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<210> 589

<211> 936

<212> DNA

<213> Unknown (H38g438 nucleotide)

<220>

<223> Synthetic construct

<400> 589

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cttggaact	gcacctcct	tctcatcatc	caggctgatg	cagccctcca	tgagcccata	180
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cagatgttct	tccttcactc	cttctccatc	atggagtcag	cagtgtgtgt	ggccatggcc	360
tttgaccgt	atgtggccat	ctgcaagcca	ctgcactaca	ccacggctcct	gactgggtcc	420
ctcatcacca	agattggcat	ggctgtgtgt	gcccggtgtg	tgacactaat	gactccactc	480
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ttgctgtggc	catgtttatt	ggagtgttgg	atctattctt	tatcatccta	tcttatact	660
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tcatgcaccg	tgtggcccg	tgtgtgtgc	cacacgtcca	cattctcctc	gccaatttct	840
atctgtctct	cccaccatg	gtcaatccca	tcactctacg	cgtaagacc	aagcagatcc	900
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<210> 590

<211> 955

<212> DNA

<213> Unknown (H38g439 nucleotide)

<220>

<223> Synthetic construct

<400> 590

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ggcttagaag	accagcacac	atggatgtct	ctcccttct	ttatttccta	ccttggtgct	120
ttccttggga	acagcctcat	catcttcac	atcatcactg	aatgcagcct	ccacgaaccc	180

atgtaccttt	tcctctgcat	gctggctgtg	gctgacctta	tcctgtctac	taccactgtg	240
cccaaggccc	tagccatatt	ttggttctat	gctggagcaa	tatcccttgg	tggctgtgtt	300
acccaaatct	tctttatcca	tgctaccttc	atcgaggaa	caggaattct	gttggcgatg	360
gcacttgacc	gctatgtggc	catctgtgat	ccactgcact	ataccacagt	gctcagtcgt	420
gcaaaaatca	caaagattgg	cttggctgtg	gtcctgagaa	gcttctgtgt	gatcatgcca	480
gatgtgtttc	tggtaaagcg	gctgcctttc	tgccatagca	atctgctgcc	acatacctac	540
tgtgagcaca	tggctgttgc	caagtttgct	tgtgctgata	ttcatgtcaa	tgtttggtat	600
ggcttgtctg	tccttctcta	tactgtagt	ctagatgcct	tgcttatctt	agtgtcctaa	660
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cataattacc	cagcggtttg	ggcaccatgt	tccttccat	acacacattc	tgctgggtaa	840
tgtctgggtg	ttggctcctc	ccatgctgaa	cccatcatt	tatgggatca	acaccaggca	900
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<210> 591

<211> 939

<212> DNA

<213> Unknown (H38g440 nucleotide)

<220>

<223> Synthetic construct

<400> 591

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ggcaatctga	ccattattct	agtgtcacgc	ctggacacca	aacttcatac	ccccatgtat	180
ttttttctta	ccaatctatc	actcctggat	ctttgttaca	ccacatgtac	agtcccacaa	240
atgctagtaa	atztatgcag	catcaggaaa	gtaatcagtt	atcgtggctg	tgtagcccag	300
cttttcatat	ttctggcctt	gggggctact	gaatatcttc	tcctggccgt	catgtccttt	360
gataggtttg	tagctatttg	tcggcctctc	cattactcag	ttatcatgca	ccagagactc	420
tgcttccagt	tggcagctgc	atcctggggt	actggtttta	gtaactcagt	gtggttgtct	480
accctgactc	tccagctgcc	actctgtgac	ccctatgtga	tagatcactt	tctctgtgaa	540
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tgtggttccc	atctaattgt	ggtgtctctt	ttttatagta	cagccgtctc	tgtgtacctg	780
caaccacctt	cgcccagctc	caaggaccaa	ggaaagatgg	tttctctctt	ctatggaatc	840
attgcaccca	tgctgaatcc	ccttatatat	acacttagga	acaaggagg	aaaggaaggc	900
tttaaaaggt	tggttgcaag	agtcttctta	atcaagaaa			939

<210> 592

<211> 997

<212> DNA

<213> Unknown (H38g441 nucleotide)

<220>

<223> Synthetic construct

<400> 592

atggaaaaat	ccaatgtcag	ctcagtgat	ggttttatct	tggtggggtt	ctctgatcgt	60
cccaagctgg	agatgggtgt	ctttacagta	aattttatct	tgtattcagt	ggctgtgctg	120
ggaaaattca	ccataatcct	tgtgtgtata	ttagactctc	aacttcatac	cccaatgtac	180
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cttttctctt	tcctttctgt	caggggaatt	gagtgcattc	ttctggctgt	catggcctat	360
gacagctatg	ctgcagctct	caaaccgttg	cgctatctgg	tcattatgca	cctccagctg	420
tgtctaggac	tgatggctgc	agcctggggg	agtggactgg	tcaatgccgt	tgtcatgtca	480
ccactaacia	tgaccctctc	cagaagtggc	cgccgccgag	ttaaccattt	cctctgtgaa	540
agccagcact	gatcaagatg	gcttgtttgg	atgttcgtgc	agtggaaatg	ctggcttttg	600
cttttgccgt	tctcatgtgc	ctactgcccc	tcactcttat	tcttgtctcc	tacggctaca	660
ttgctgcagc	tgtgctaagc	atcaagtcag	ctgccaggca	atggaaggcc	ttccatacct	720

gtagctctca	cctcacagt	gtctccctgt	tttatgggag	catcatctat	atgtatatgc	780
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tgaagaaggt	tttggggagg	caataatgaa	ctggagaaat	atgataagtt	gtgaagtcct	960
aggcaaaaata	tcttttccaa	atacatttat	tttgtgc			997

<210> 593

<211> 950

<212> DNA

<213> Unknown (H38g442 nucleotide)

<220>

<223> Synthetic construct

<400> 593

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cacacctggc	catcattgat	atttcgtatg	cttccaacaa	tgcccccaag	atgctgacaa	180
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cctgaggctg	cccttctgtg	ggccccatga	aatcaaccac	ttcttctgtg	aaatcctgtc	480
tgctctcaag	ttggcctgtg	ctgacacctg	gctcaaccag	gtgggtcatct	ttgcttcttc	540
agtgttcac	ctgggtggggg	cgctctgcct	ggtgctggtc	tcctactcgc	gcacccctggc	600
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<210> 594

<211> 711

<212> DNA

<213> Unknown (H38g443 nucleotide)

<220>

<223> Synthetic construct

<400> 594

cagatgctga	cagattgggtg	gggacctaat	aggaccacaa	gttacgtgaa	ctcaccattc	60
aattccttgt	ctctctgtag	ttatgtgcca	ctatataatt	tctacaatta	ttttataatt	120
atatgccatc	cttttgtaata	tttggttaatc	atgaacctat	atctcctcct	taatcttact	180
ttaatacttg	agtataaatt	cattcatttt	tgatcatcatg	tatactctca	tcctaaaatt	240
cccaagggtat	gaaaaaaaaa	aaacttcagg	ataattccct	ccatgtgttg	ctagctatgc	300
tgaaaacagt	ttttctagat	gctacaattg	aagaaatgtc	tgtattttgtg	ttaatacaat	360
gtaaatgtcc	taatatgcct	tatcagtaat	tttacctgct	atggctacat	tgagggtgcac	420
taagaatgaa	tactagtaat	taaattagaa	gcaagctgag	aaatcagtat	catcatcatc	480
atcatagggtg	tcatttcatt	atagattcaa	tcttctatgg	aatcattgtg	taaagtctct	540
tgaagatgggt	aacaactcct	cccaagacca	agaaatgatt	ctttatcttg	ttttacacta	600
tactaactcc	aagtctcaaa	cttctagttt	atctgttaag	aataaagata	taaaggatat	660
ttcaaggaga	atactaagat	tggcagggaa	tcttcaaaaa	tgaaggaaa	c	711

<210> 595

<211> 765

<212> DNA

<213> Unknown (H38g444 nucleotide)

<220>

<223> Synthetic construct

<400> 595

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cctaagatgg	catctgattt	tctgcatgga	aacaagtcta	tctccttcac	tgggtgtggg	120
attcatagtt	tcttcttcac	gacttttagcc	gttgtagaag	cgctactcct	gatataatg	180
gcctatgttc	gttgcatgac	tatttgcttt	cctctccact	atctcatgag	catgagcaaa	240
agagtgtgtg	tgctgatgat	aacaggatct	tggatcatag	gctcgatcaa	tgcttgtgct	300
cacactgtat	atatactcca	tattccttat	tgcccatcta	gggttatcaa	tcatttcttc	360
tgtgatgtcc	cagcaatggg	gactctggcc	tgcatggaca	cctgggtcta	tgagggcaca	420
gtgcttttga	gagccaccat	ctttctcggt	tttcccttca	ttgctatttc	atgttcctat	480
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tatctacgcc	caagatccct	gcgatctccg	acagaggaca	agggttctggc	tgtcttctac	660
accatcctca	ctccaatgct	caaccccatc	atctacagcc	tgagaaacaa	ggaggtgatg	720
ggggccctga	cacgagtgat	tcagaaaatc	ttttcagtga	aaata		765

<210> 596

<211> 960

<212> DNA

<213> Unknown (H38g445 nucleotide)

<220>

<223> Synthetic construct

<400> 596

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cccaggctgg	agcatgtcct	ctttgtgttt	gtcctcatct	tctacctgt	gaccttagtg	120
ggcaacatca	tcattatctt	gatctccac	ctggaccctt	gcctccacat	gcccattgtac	180
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tgcggttccc	acctcaccgt	ggtctccttg	ttttatggga	atattatcta	tatgtatatg	780
caaccatgaa	ataattcttc	tcaggaccaa	gggaagttcc	ttaccctttt	ctacaactta	840
atgaccccca	tgtaaaacc	gtcatcttat	acactgagaa	acaaggatgt	aaaagggtgca	900
ctgaagaggc	ttgtgtctag	aaaacacagt	gacagtgtact	gctcttgaga	ctgcttcttt	960

<210> 597

<211> 377

<212> DNA

<213> Unknown (H38g446 nucleotide)

<220>

<223> Synthetic construct

<400> 597

atggaaaatt	acaatcaaac	atcaactgct	ttcatcttgt	tgggattgtc	gccaccacca	60
aaaattggcc	atttcatctt	cattctcatt	aatttcgttt	tcctaattggc	tctaattgga	120
aacctatcca	tgattcttct	catcttcttg	gacatccatc	tccacacacc	catgtatttc	180
ctacttagtc	agctctccct	cattgacctt	aattatattt	ccaccattgt	tcctaagatg	240
gtttatgatt	tttcatgtat	ggaaacaagt	ctatctcctt	cactgggtgt	gggattcaga	300
gtttcttctt	cctgacttta	gcaggtgcag	aagcgtgtgt	cctgacatca	atggcctatg	360
atcgttatgt	ggctatt					377

<210> 598

<211> 979

<212> DNA

<213> Unknown (H38g447 nucleotide)

<220>

<223> Synthetic construct

<400> 598

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ggcaatggca	ccattatact	tttatccatt	gtagatcctc	gcctccatac	ccctatgtat	180
ttcttctctc	ccaatctctc	ttttatggat	ctttgtttga	ccacttgtag	tgccccctag	240
acactggta	actttaaggg	gaaggacaag	accatcacct	atgggtggctg	cgtgaccag	300
ctattcattg	ccttgggact	cggggggagt	ggagtgtgtc	ttattgtctg	ccatggccta	360
tgaccgctat	gcagccgtct	gccgcccact	ccactacatg	gtgagcatgc	atccccaact	420
ttgcttgtag	ttgggtgtaa	ccacttggct	cacagggttt	ggcaattctg	tgatacagac	480
agcattgacc	atgactctcc	ccctctgtga	taaaaaccaa	gtggatcatt	tcttctgtga	540
agttccagtg	atgctgaaac	tgtcctgcac	caacacctcc	atcaacgagg	ctgaaatctt	600
tgctgtcagt	gtcttcttct	tgggtgtgcc	tctctcactc	atcttagcat	cctatgggtca	660
cattactcat	gcagtcctga	agataaagtc	agctcaaggg	aggcagaagg	cttttggaa	720
ctgtgggtct	cagctcctgg	tagtgatcat	tttcttggg	acactcatct	ccatgtacct	780
ccagcctccc	tccagttatt	cacaggatgt	gaacaaaagc	attgcactct	tctatactct	840
ggtgactcct	ctactgaatc	ccctaattta	cactctgagg	aacaaggaag	tcaaaggggc	900
aactaagaag	actagtgggg	aggaccatag	atgcatgaga	aagttaacgc	agggtttgca	960
gttccaaaca	tttgtgcac					979

<210> 599

<211> 936

<212> DNA

<213> Unknown (H38g448 nucleotide)

<220>

<223> Synthetic construct

<400> 599

atggaaaatt	acaatcaaac	atcaactgat	ttcatcttat	tggggctggt	tccaccatca	60
ataattgacc	ttttcttctt	cattctcatt	gttttcattt	tcctgatggc	tctaattgga	120
aacctgtcca	tgattcttct	catcttcttg	gacacccatc	tccacacacc	catgtatttc	180
ctactgagtc	agctctccct	cattgacctc	aattacatct	ccaccattgt	tcctaagatg	240
gcatctgatt	ttctgcatgg	aaacaagtct	atctccttca	ctgggtgtgg	gattcagagt	300
ttcttcttct	tggcattagg	aggtgcagaa	gcactacttt	tggcatctat	ggcctatgat	360
cgttacattg	ctatttgctt	tcctctccac	tatctcatcc	gcatgagcaa	aagagtgtgt	420
gtgctgatga	taacagggtc	ttggatcata	ggctcgatca	atgcttgtgc	tcacactgta	480
tatgtactcc	atattcctta	ttgccgatcc	agggccatca	atcatttctt	ctgtgatgtc	540
ccagcaatgg	tgactctggc	ctgcatggac	acctgggtct	atgagggcac	agtgtttttg	600
agtgccacca	tctttctcgt	gtttcccttc	attggtattt	catgttccta	tggccaggtt	660
ctctttgctg	tctaccacat	gaaatctgca	gaagggagga	agaaagccta	tttgacctgc	720
agcaccacc	tactgtagt	aactttctac	tatgcacctt	ttgtctacac	ttatctacgt	780
ccaagatccc	tgcgatctcc	aacagaggac	aagggtctgg	ctgtcttcta	caccatcttc	840
accccaatgc	tcaaccccat	catctatagc	ctgaggaaca	aggaggtgat	gggggccctg	900
acacgagtga	gtcagagaat	ctgctctgtg	aaaatg			936

<210> 600

<211> 936

<212> DNA

<213> Unknown (H38g449 nucleotide)

<220>

<223> Synthetic construct

<400> 600

atgcccatt	caaccaccgt	gatggaattt	ctcctcatga	ggttttctga	tgtgtggaca	60
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ctacagattt	tacattctgc	atccttcttt	atgttgatt	tggttaactct	aatgggaaac	120
atcctcattg	tgaccgtcac	cacctgtgac	agcagccttc	acatgcccac	gtacttcttc	180
ctcaggaatc	tgtctatctt	ggatgcctgc	tacatttctg	ttacagtccc	tacctcatgt	240
gtcaattccc	tactggacag	caccaccatt	tctaaggcgg	gatgtgtagc	tcaggtcttc	300
ctcgtgggtt	tttttgata	tgtggagctt	ctgtttctca	ccattatggc	tcatgaccgc	360
tatgtggctg	tctgccagcc	acttcactac	cctgtgatcg	tgaactctcg	aatctgcac	420
cagatgacac	tggcctccct	actcagtggg	cttgtctatg	caggcatgca	cactggcagc	480
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tctctgctga	agctctcttg	ctctgacacc	ttcagcaatg	aggtcatgat	tggtgtctct	600
gctctggggg	taggtggcgg	ctgtttcacc	tttatcatca	ggtcttacat	tcacatcttt	660
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cctgcgatac	ctgcagccac	ccaggatctg	atcctttctg	gtttttatcc	cataatgcct	840
ccctctttta	accctattat	ttacagtctt	agaaataagc	aaataaaggc	ggccatcaag	900
aaaatcatga	agagaatttt	ttattcagaa	aatgtg			936

<210> 601

<211> 931

<212> DNA

<213> Unknown (H38g450 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(931)

<223> n = A,T,C or G

<400> 601

aggaatgccc	cactggaaaa	atacaatcaa	acatcaactg	atttcatctt	attgggggatc	60
ttcccacccat	ccagaattgg	ctttctcttc	ttcattctcc	ttgttctcat	tttgctattg	120
gctttaattg	gcaatcagtc	cgtgatccct	ctcatcttct	tggaactcca	tctccacacg	180
cccatttatt	tcttacttag	tcggctctac	ctcattgacc	taaattacat	ctccactatt	240
gtccccagat	gttttctgat	tttctgtttg	gaaacaagtc	tatttctctc	attgggtgtg	300
gaattcagag	tttcttcttt	gtgacttttag	cagggtgcaga	aatgctgcca	ctgacatcaa	360
tggcctgtga	tcattatgta	gctgtttgct	ttcctctcca	ctatcccatc	catatgagca	420
agatagtagt	tgctgatgat	aataggatct	tggaataatg	gctctatoga	cacttgtgct	480
cacatttcat	atatgcccac	tatccctggt	gctcagccag	ggctgtgatg	tcccagccat	540
ggtgactctg	gccttcgtgg	acacctgggt	ctatgagtgc	acagtgtttt	tgagcacaac	600
cctctttctc	atgtttacct	ttattgggtat	tgcatgttcc	tatggtgagg	ttctcettac	660
tgtctaccac	attaaatctg	cagaagggag	gaagaaggcc	tattcgacct	gtagcaccca	720
cctcactgta	gtaattntct	actatgcaat	gtttgcttat	acctatctat	atccaagata	780
cctgcaatct	ccaacagagg	acaaggttct	ggctgtgttc	tacaccatcc	tcacctcaat	840
gctcaacccc	atcatctaca	gcctgagaaa	cagggagggtg	atggggggccc	tgacacgagt	900
gagtcagaga	atcttccttg	tgaagatgaa	g			931

<210> 602

<211> 577

<212> DNA

<213> Unknown (H38g451 nucleotide)

<220>

<223> Synthetic construct

<400> 602

agacacacag	agccacggaa	tctcacaggt	gtctgagaat	tcctctctct	gggactctca	60
gaggatccag	aactgcagcc	tgtcctcgct	ttgctgtccc	tgctccctgtc	cctgtccttg	120
tatctgggtca	tggttctgag	gaacctgtct	agcatcctgg	ctgtcagctc	tgactcccc	180
ctccataccc	ccatgtactt	cttctctctc	aacctgtgct	gggctgacat	cgggttcaat	240
tcggccaacg	ttcccaaggt	gactgtggac	atgcagtcgc	atagcagagt	catctctcat	300
gcgggctgcc	tgacacagat	gtctttcttg	gtcctttttt	gcatgtatag	aatgcatgct	360

cctgactgtg	atggcctatg	acggccttgt	agccatctgt	ctccctctgc	actaccag	420
catcatgaat	cctcacctct	gtgtctctct	cgttttgggt	tccttttcc	ttagcctgtt	480
ggattcccag	ctgcacgggt	ggattgtgtg	acaattcacc	atcatgaaga	atgtggaaat	540
ctctcatttt	gtaagtgacc	cctctcaact	tctcaac			577

<210> 603

<211> 952

<212> DNA

<213> Unknown (H38g452 nucleotide)

<220>

<223> Synthetic construct

<400> 603

atggacagaa	gaaaccagac	ctgcatctat	gaatttcttc	tcattgggctt	ctctgaacac	60
caggagcagc	aggctctttt	gtttgggctt	ttcctgggtca	tgtacttgggt	caactgtgttg	120
gagaacctgc	taatcatcct	ggccattggc	tctgacctgc	acctccacac	cccccatgta	180
cctcttctctg	tccaacctgt	ccttttttga	tattggcttt	atctctacaa	taattcccaa	240
gatgctagat	catattagct	caggaattaa	gctgatttct	tatggggagt	gtctgacaca	300
actctatttc	tctggcctat	ttgcagatct	ggacaacaac	tttctcctgg	ctgtgatggc	360
ccttgaccgc	tatgtggcca	tcagccatcc	tctccattat	gccctaacca	tgaactccca	420
acgctgtgtc	ctgttggtgg	ctgtgtcatg	gggtgatcact	atctttacatg	ccctagtgc	480
taccctccta	gtgaccaggc	tttcttctctg	tgggtccaaat	attatccctc	acttcttctg	540
tgatctggtc	ccactcctga	agctggcctg	ctccagtagt	tgtgtcaatg	atctgggtgct	600
catccttgtg	gcaggaacac	tgtgtattgc	gccccttctg	tgcattcctta	tgtcctactt	660
ttacattgca	ttggccatcc	tgagaattga	ttccccaagg	ggtaagcaaa	gggccttctc	720
cagctgcact	tcccacctct	ctgtagtctc	tctgttctat	agcacagcta	tcgggtgtcta	780
tttatgtcct	ccatcatccc	actcagatgg	aaaggacaga	gtcttctcag	tcattgtacac	840
gggtgtgact	cccattgtga	acccttctat	ctacagcctg	aggaacaggg	atatgaaggg	900
ggcactggga	aaactgcttg	gaataaaaaac	atcctaacac	ccttactcaa	ga	952

<210> 604

<211> 754

<212> DNA

<213> Unknown (H38g453 nucleotide)

<220>

<223> Synthetic construct

<400> 604

cattttagt	ggtgcgtgtt	cagataacctg	ggtattgtgg	tggagatata	catagtcttt	60
tgaacattcc	gtttaggtgc	gctggtagct	ggatatgtcc	tttaaaacttt	tgtggcaatt	120
catttgagaa	gaaacgcagc	tttttctatt	gagttcttat	gctataagta	aaggatgcaa	180
gacattaatt	agacaaaata	aggtaaaatt	ttgtattcgc	ttagagagtt	taagaggcta	240
ttagccacta	gtctctatag	tgcctaagta	aatcgattct	gcttaataaaa	ctgtacctg	300
gcttagtaag	taaacaatt	gaaacttatt	ttaggaaaga	aatatatatt	cttatatcta	360
catcagattc	tcttatgtag	aaacactaga	gggtgaatga	ggagttaatg	taagcagcat	420
catatttttg	ctcattcctt	tctctatgat	ttctgttctt	tctgtccaaa	ttctgtgagg	480
tgtcctctag	atgaaattat	cacaggcatg	gaaaaggcca	ttttccactt	gggtccatcct	540
catgattgca	gttgaacat	actgggactc	attcattttc	acatatgtat	atgagactta	600
aatcatccac	atttcaggcc	agggttaagtt	tctagaaata	ttctatgctt	tccttgact	660
tacactcaat	cctgtcgtct	acagcggttg	cactgacagt	gttctggtgg	caatgaaaaa	720
tatgctctag	agcaacattc	tacataaaaa	aaag			754

<210> 605

<211> 939

<212> DNA

<213> Unknown (H38g454 nucleotide)

<220>

<223> Synthetic construct


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<400> 605
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cgagagctgg agtttttctt gtttgtggtc ttctttgctg tgtatgtagc aacagtcctg      120
ggaaatgcac tcattgtggg cactattacc tgtgagtcgc gcctacacac tcctatgtac      180
tttctcctgc ggaacaaatc agtcctggac atcgtttttt catctatcac cgtccccaag      240
ttcctgggtg atctttttatc agacagggaaa accatctcct acaatgactg catggcacag      300
atctttttct tccactttgc tgggtggggca gatatttttt tctctctctg gatggcctat      360
gacagatacc ttgcaatcgc caagcccctg cactatgtga ccatgatgag gaaagagggtg      420
tgggtggcct tgggtgggtg ttcttgggtg agtgggtgggt tgcattcaat catccaggta      480
attctgatgc ttccattccc ctctctgtgg cccaacacac tggatgcctt ctactgttat      540
gtgtccagg tggtaaaact ggcctgcact gacacctttg ctttggagct tttcatgatc      600
tctaacaacg gactgggtgac cctgctctgg ttccctcctgc tectgggctc ctacactgtc      660
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acgtcccaca tgcctgggtg gactcttcac ttctgtgcct gtgtttacat ctactgccgg      780
cccttcatga cgctgcccat ggacacaacc atatccatta ataacacggg cattaccccc      840
atgctgaacc ccatcatcta ttccctgaga aatcaagaga tgaagtcagc catgcagagg      900
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<210> 606

<211> 927

<212> DNA

<213> Unknown (H38g455 nucleotide)

<220>

<223> Synthetic construct

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<400> 606
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cggcctgagg accaaaagac actctttgtt ctcttcctca tcgtgtacct ggtcaccata      120
acagggaacc tgctcatcat cctggccatt cgcttcaacc cccatcttca gaccctatg      180
tatttcttct tgagttttct gtctctcact gatatttgc ttaacaacaag cgttgtcccc      240
aagatgctga tgaacttctc gtcagaaaag aagaccatct cctatgctgg gtgtctgaca      300
cagatgtatt ttctctatgc cttgggcaac agtgacagct gccttctggc agtcatggcc      360
tttgaccgct atgtggccgt ctgtgacctt ttccactatg tcaccaccat gagccaccac      420
cactgtgtcc tgcctgggtg ctctcctctgc tcatctctc acctccactc actcctgcac      480
acacttctgc tgaatcgtct caccttctgt gactccaatg ttatccacca ctttctctgt      540
gacctcagcc ctgtgctgaa attgtcctgc tcttccatat ttgtcaatga aattgtgcag      600
atgacagaag cactatttgt tttgggtgact cgttttctct gcattgcttt ctcttatata      660
cgaatcctca ctacagttct caagattccc tctacttctg ggaaacgcaa agccttctcc      720
acctgtgggt tttacctcac cgtgggtgac ctcttttatg gaagcatctt ctgtgtctat      780
ttacagcccc catccacctc cgctgtcaag gaccacgtgg caacaattgt ttacacagtt      840
ttgtcatcca tgcctaatcc ttttatctac agcctgagaa acaaagacct gaaacagggc      900
ctgaggaagc ttatgagcaa gagatcc      927

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<210> 607

<211> 939

<212> DNA

<213> Unknown (H38g456 nucleotide)

<220>

<223> Synthetic construct

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ctgcgggatt tatatgggtg gctcttccca ctgatttacc tggcagccct aatgagtaac      120
cttctcatca ttactctcat taccctggac gtaaagctcc aaacacccat gtacttctc      180
ctgaagaact tctccttttt ggatgtcttc ctgggtgtctg ttccaatccc aaaattcatt      240
gtcaacaacc taaccacaaa caattccatt tccattctag gatgtgcctt ccagctactt      300
ttaatgactt ctttctcagc aggagagata tttatcctca ctgccatgtc ctatgaccgc      360
tatgtagcca tctgctgtcc cctgaactac gaggtaatca tgaatactgg agtctgtgtg      420

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ttaatggcaa	gtgttttctg	ggccattgga	gggctctttg	gtactgcgta	cacagctggc	480
acattttcca	tgcctttctg	tggctccagt	gtgattccac	agtttttctg	tgatgttcct	540
tcattactaa	ggatttccctg	ttctgaaaca	ctaattggtaa	tttatgcagg	tattggagtt	600
ggtgcatggt	taagcatttc	ttgtttcatc	tgtattgtga	tctcttacat	ttatatcttc	660
tccactgtac	tgaagatccc	taccactaaa	ggtcagtcca	aagctttttc	cacatgcttc	720
ccccatctca	ctgtttttcac	tgtttttatc	ataactgctt	attttggtta	tcttaagcca	780
ccttcaaatt	caccatctgt	tattgacagg	ctgctttctg	tgatctacac	tgtgatgcct	840
ccagtattta	accctgtaac	ctacagcctg	cggacaatg	acatgaaatg	tgctctgata	900
aggttgctgc	agaaaacata	tggtcaggag	gcttacttc			939

<210> 608

<211> 972

<212> DNA

<213> Unknown (H38g457 nucleotide)

<220>

<223> Synthetic construct

<400> 608

atggctgtag	gaaggaacaa	cacaattgtg	acaaaattca	ttctcctggg	actttcagac	60
catcctcaaa	tgaagatttt	ccttttcatg	ttattttctg	ggctctacct	cctgacgttg	120
gcctggaact	taagcctcat	tgccttcatt	aagatggact	ctcacctgca	catgcccatt	180
tactttcttc	tcagtaacct	gtccttctct	gacatctgct	atgtgtcctc	caccgcccct	240
aagatgctgt	ctgacatcat	cacagagcag	aaaaccattt	cctttgttgg	ctgtgccact	300
cagtactttg	tcttctgtgg	gatggggctg	actgaatgct	ttctcctggc	agctatggcc	360
tatgaccggg	atgctgcaat	ctgcaacccc	ttgctttaca	cagtcctcat	atcccataca	420
ctttgtttaa	agatgggtgg	tggcgccat	gtgggtggat	tccttagttc	tttcattgaa	480
acatactctg	tctatcagca	tgattttctg	gggccctata	tgatcaacca	ctttttctgt	540
gacctccctc	cagtcctggc	tctgtcctgc	tctgatacct	tcaccagcga	gggtggtgacc	600
ttcatagtca	gtgttgctgt	tgggaatagtg	tctgtgctag	tggctcctcat	ctcttatggg	660
tacattgttg	ctgctgttgt	gaagatcagc	tcagctacag	gtaggacaaa	ggccttcagc	720
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ttggtgatcc	cgtggtgaa	tcccatcatc	tacagtttta	ggaataagga	gattaaaaat	900
gccatgagga	aagccatgga	aagggacccc	gggattttctc	acggtggacc	attcattttt	960
atgaccttgg	gc					972

<210> 609

<211> 942

<212> DNA

<213> Unknown (H38g458 nucleotide)

<220>

<223> Synthetic construct

<400> 609

atgaccaatc	agacacagat	gatggaattc	ttgcttgtga	gatttactga	gaattggggtg	60
ctcctgaggc	tgcattgctt	gctcttctca	ctgatctacc	tcacggctgt	gctgatgaat	120
ttagtcatca	ttctcctcat	gattctggac	catcgtctcc	acatggcaat	gtactttttc	180
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gccctactaa	agctcacttg	ttctaaagaa	catgccatca	ttagtgtcag	tgtggccatt	600
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gggtctgatg	caccttctat	tctagacttg	ctgggtgtctg	tgttctatct	tgtcgcacct	840
ccaaccttga	accctgttat	ctactgtctg	aagaacaagg	acattaaatc	cgctctgagt	900

aaagtcctgt ggaatgttag aagcagtggg gtaatgaaaa ga

942

<210> 610

<211> 921

<212> DNA

<213> Unknown (H38g459 nucleotide)

<220>

<223> Synthetic construct

<400> 610

atgaatcaca	gcgttgtaac	tgagttcatt	attctggggc	tcaccaaaaa	gcctgaactc	60
cagggaaatta	tcttctctt	ttttctcatt	gtctatcttg	tggtctttct	cggcaacatg	120
ctcatcatca	ttgccaaaat	ctataacaac	accttgcata	cgcccatgta	tgttttcctt	180
ctgacactgg	ctgttggtga	catcatctgc	acaacaagca	tcataccgaa	gatgctgggg	240
accatgctaa	catcagaaaa	taccatttca	tatgcaggct	gcatgtccca	gctcttcttg	300
ttcacatggg	ctctgggagc	tgagatgggt	ctcttcacca	ccatggccta	tgaccgctat	360
gtggccattt	gtttccctct	tcattacagt	actgttatga	accaccatat	gtgtgtagcc	420
ttgtcagca	tggtcatggc	tattgcagtc	accaattcct	gggtgcacac	agctcttctc	480
atgaggttga	ctttctgtgg	gccaaacacc	attgaccact	tcttctgtga	gatacccca	540
ttgctggctt	tgctctgtag	ccctgtaaga	atcaatgagg	tgatgggtga	tggtgctgat	600
attaccctgg	ccatagggga	ctttattctt	acctgcatct	cctatgggtt	tatcattggt	660
gctattctcc	gtatccgcac	agtagaaggc	aagaggaagg	ccttctcaac	atgtctcatc	720
catctcacag	tggtgaccct	ttactattct	cctgtaattc	acacctatat	ccgccctgct	780
tccagctata	catttgaaag	agacaagggtg	gtagctgcac	tctatactct	tgtgactccc	840
acattaaacc	cgatgggtga	cagcttccag	aatagggaga	tgcaggcagg	aattaggaag	900
gtggttgcat	ttctgaaaca	c				921

<210> 611

<211> 810

<212> DNA

<213> Unknown (H38g460 nucleotide)

<220>

<223> Synthetic construct

<400> 611

atggaagtga	gtgggaacca	cacctctgtg	gccatgtttg	ttctcctagg	actctcagat	60
gaaaaagagc	tgcagctcat	cctctttcca	gtcttcctgg	tgatctacct	tgtgaccctg	120
atttggaaca	tggttcttat	catcctcatc	agaatagact	ctcatctgaa	cacacccatg	180
tacttttttc	tcagtttctt	ctcattttaca	gacatctgct	attcttctac	catcagccca	240
aggatgcttt	cagacttctt	aaaagataag	aagacaattt	ccttctcttg	ctgtgccact	300
cagtattttc	ttggggcctg	gatgagtcct	gctgagtgct	gcctcttggt	catcatggcc	360
tgtgacagat	atgtggccat	tggcagcccc	ctgcagtact	cagcaatcat	ggtccctagt	420
atctgttgga	agatggtagc	tggagtctgt	gggggtggat	tccttagtag	cttagttcat	480
acagtccctt	gctttaatct	ctactactgt	gggccaaata	tcattcaaca	tttcttctgt	540
aacacacttc	agattatttc	cttgtcttgc	tccaaccctt	ttatcagcca	aatgattctt	600
tttctggaag	ctatttttgt	tgggttgggc	tctttgcttg	ttatcctttt	gtcttatggg	660
ttcattgtag	cttccatact	gaaaatatca	tcaaccaa	gttggtgcca	ggccttcaat	720
acctgtgcct	cccacctggc	agctgtggct	ctcttctatg	gcacagccct	ttctgtgtac	780
atgcatacta	gctctagcca	ctccatgaag				810

<210> 612

<211> 988

<212> DNA

<213> Unknown (H38g461 nucleotide)

<220>

<223> Synthetic construct

<400> 612

tactccaaag	aaattataga	ataatgtact	tccaatgata	ttataaaatg	tggttagcat	60
aataagatta	ctttttttac	tgtttatcct	tttagagttc	acagaagatt	tggtgttaca	120
gcaagtgtct	tttttcatct	ttctcatcat	ttatgtcatc	agcctctcag	gcaacatcat	180
tctgaattct	ctcatctgtg	ctgattcttg	gccctacaca	cccatgtatt	tcttctactg	240
aaaccgggtc	cttctggatc	tctgggtatt	ctctgtccac	atccccgata	tcctgtctgac	300
ttgcatttct	gatgacaaaa	ccatctcctt	tcctgggtgc	cttgctcagt	tcttctctgc	360
tgtgttggtc	taaaatgagt	gctatatgat	ggcttccatg	gcttatgacc	gctacatggc	420
aatctccaag	cccctgcttt	attcccgggc	cacattccca	gagttatgtg	ccagtcttgt	480
tgaggcttca	caccttggcg	gctttgtaaa	ctcaaccatc	atcaccagt	agacacctac	540
cttgagcttc	tgtggcagca	atatcattga	tgatttcttc	tgtgatctgc	ccccacttgt	600
aaagttggtg	tgtgatgtga	aggagcgcta	ccaggctgtg	ctgcatttta	tgcttgccctc	660
caatcatcac	tcccactgca	cttattcttg	cgctccatctc	ttcatcattg	cagccatctc	720
gaagatccgt	tccattaagg	gccgcctcca	ggtcttctcc	acttgtgggt	ctccccctgac	780
ggctctcacc	ttgtactatg	gtgcaatctt	ctttatttac	tccaaccaaa	gaactagcta	840
tgccttaaaa	atggataaat	tggggtcagt	gttctatact	gtgggtgattc	caatgctaaa	900
ccccttgatc	tatagcttaa	gaaataagga	tgtcaaagat	gccttgaaga	aaatgttaga	960
tagacttcag	tttcttaag	aaaaatat				988

<210> 613

<211> 1049

<212> DNA

<213> Unknown (H38g462 nucleotide)

<220>

<223> Synthetic construct

<400> 613

atggagcaga	gcaattattc	cgtgtatgcc	gactttatcc	ttctgggttt	gttcagcaac	60
gcccgtttcc	cctggcttct	ttgccctcat	tctcctggtc	tttgtgacct	ccatagccag	120
caacgtggtc	aagatcattc	tcattccacat	agactcccgc	ctccacaccc	ccatgtactt	180
cctgctcagc	cagctctccc	tcagggacat	cttgtatatt	tccaccattg	tgcccaaaat	240
gctggctcag	caggtgatga	gccagagagc	catttccctt	gcaggatgca	ctgcccacaa	300
cttcctctac	ttgaccttag	caggggctga	gttcttcttc	ctaggactca	tgtcctgtga	360
tcgctacgta	gccatctgca	accctctgca	ctatcctgac	ctcatgagcc	gcaagatctg	420
ctggttgatt	gtggcggcag	cctggctggg	agggctctatc	aatggtttct	tgctcaccct	480
cgtcaccacg	cagttcccct	tctgtgcctc	tcgggagatc	aaccacttct	tctgcgaggt	540
gcctgccttt	ctgaagctct	cctgcacgga	cacatcagcc	tatgagacag	ccatgtatgt	600
ctgctgtatt	atgatgctcc	tcattccctt	ctctgtgac	tcgggctctt	acacaagaat	660
tctcattact	gtttatagga	tgagcgaggc	agaggggagg	cgaaaggctg	tgccacctg	720
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cactcccacg	ctcaatccac	tcatttacag	ccttaggaac	aaggatgtca	cgggggccct	900
acagaagggt	gttgggaggt	gtgtgtcctc	aggaaaggta	accactttct	aaacaaattg	960
catatgctgc	tagagacttg	aaatgaagga	tacaagactt	tatcattgcc	cttgagttta	1020
aatattctct	gcctggaaac	aagtgaccc				1049

<210> 614

<211> 957

<212> DNA

<213> Unknown (H38g463 nucleotide)

<220>

<223> Synthetic construct

<400> 614

atgggtgttc	acaatttggt	cacgggtgact	cagtttatcc	ttatagggtc	ctcttacttc	60
tccaatgagc	actaccttct	ttttgtggcc	cttgccatta	tctgtcaggt	gttcttggtg	120
cgaagtggag	acattctctt	ggccattggg	actgtgatta	agttgcacac	tactcatgta	180
ttattttttg	gcaaagtgtg	ccatcttaga	catattgtgt	tcacagcta	ctatacctaa	240
gatgcctaag	attctctaga	ctgaggatca	cagcatttct	tttggttaggt	gagctttgca	300
gccctatttc	ctagtggcct	gggctgggaa	gaaagcttcc	tcactgttac	ggcttatgac	360

tgggtgtgtgg	tcacatgttt	ctccctttgt	tacatcctga	tcataaaca	attggctctg	420
tccagctggg	ttatgggacc	tgagcagctg	ggtttctaaa	tttctctctc	ctccacgtag	480
tgtctaccct	ctgcctgtct	ttctgcaagc	ctgacgagtg	taaccagtat	tactgtgata	540
tctcaccgat	gggggcccctg	ttgtgccagt	ccatgcacct	ggcaaacaatg	cttgttttag	600
eggaaatcagt	tatcttgggg	atcagtgctt	ttctggctgc	ctttaacttt	tacatatata	660
tcacatccac	tatcctaaag	atccagtgtg	tagagtggag	tgcaaagtgc	ttctctacat	720
gcacttccca	cctccttaag	gtctgtttgt	tctatggcat	attgacattt	acctacattt	780
actccttctc	cagtcacac	tcacatgtct	aaggcaagcc	cagatctagc	cacagacagg	840
ctcatctcta	tgctatacag	agttattacc	ctgatgttta	acttcacac	tgacaacctg	900
agaaacacag	aggtaaaagg	agcctcagaa	aggttttatg	tcattgaaca	tgttttat	957

<210> 615

<211> 840

<212> DNA

<213> Unknown (H38g464 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(840)

<223> n = A,T,C or G

<400> 615

atgtacctga	ccacgggtgct	ggggaacctg	ctcatcatgc	tgctcatcca	gctggactct	60
caccttcaca	cccccatgta	cttcttctct	agccacttgg	ctctcactta	tttttctttt	120
tcacatgtca	ctgtccctaa	gatgctgatg	gacatgcgga	ctaagtacaa	atcgatctct	180
tatgaggaat	gcatttctca	gatgtatttt	tttatatttt	ttactgacct	ggacagcttc	240
cttattacat	caatggcata	tgaccgatat	gttgccatat	gtcacccctct	ccactacact	300
gtcatcatga	gggaagagct	ctgtgtcttc	ttagtggctg	tatcttggat	tctgtcttgt	360
gccagctccc	tctctcacac	ccttctctct	acccggctgt	ctttctgtgc	tgcgaaacac	420
atcccccatg	tcttctgtga	ccttctgtgc	ctgctcaagc	tgctctgtct	agatatcttc	480
ctcaatgagc	tggtcatgtt	cacagtaggg	gtgggtggca	ttaccctgcc	attcatgtgt	540
atcctgggat	catatggcta	cattggggcc	accatcctga	gggtcccttc	aaccaaaggg	600
atccacaaag	cattgtccac	atgtggctcc	catctctctg	tggtgtctct	ctattatggg	660
tcaatatattg	gccagtacct	tttcccagct	gtaagcagtt	ctattgacaa	ggatgtcatt	720
gtggctctca	tgtaacagg	ggtcacaccc	atgttgaacc	cctttatcta	cngcattnng	780
aacagggaca	tgaaagaggc	ccttgggaaa	ctcttcagta	gagcaacatt	tttctcttgg	840

<210> 616

<211> 909

<212> DNA

<213> Unknown (H38g465 nucleotide)

<220>

<223> Synthetic construct

<400> 616

atgaattcat	caagtgactg	aagacaacca	gtgatggacg	gggtgaatga	tagctccttg	60
cagggtctttg	ttctgatggg	catatcagac	catccccagc	tgagatgat	cttttttata	120
gccatcctct	tctcctatct	gctgacccta	cttgggaact	caaccatcat	cttgccttcc	180
cgcttgagg	cccggctcca	tacacccatg	tacttcttcc	tcagcaacct	ctcctccttg	240
gaccttgctt	tcgctactag	ttcagtcctc	caaatgctga	tcaatttatg	gggaccaggc	300
aagaccatca	gctatgggtg	ctgcataacc	cagctctatg	tcttctcttg	gctgggggccc	360
accgagtcca	tctgtgctgt	ggtgatggca	tttgaccgct	acgtggcagt	gtgccggccc	420
ctccgctaca	ccgccatcat	gaacccccag	ctctgctggc	tgctggctgt	gattgcctgc	480
ctgggtggct	tgggcaactc	tgtgatccag	tcaacattca	ctctgcagct	cccattgtgt	540
gggcaccgga	gggtggaggg	attcctctgc	gaggtgcctg	ccatgatcaa	actggcctgt	600
ggcgacacaa	gtctcaacca	ggctgtgctc	aatgggtgct	gcaccttctt	cactgcagtc	660
ccactaagca	ctcctgtgat	ctcctactgc	ctcattgctc	aggcagtgtc	gaaaatccgc	720
tctgcagagg	ggaggcgaaa	ggcgttcaat	acgtgcctct	cccattctgt	ggtgggtgtc	780

ctcttctatg	gctcagccag	ctatgggtat	ctgcttccgg	ccaagaacag	caaacaggac	840
cagggcaagt	tcatttccct	gttctactcg	ttgggtcacac	ccatgggtgaa	ttccctcatc	900
tacacgctg						909

<210> 617

<211> 926

<212> DNA

<213> Unknown (H38g466 nucleotide)

<220>

<223> Synthetic construct

<400> 617

atgcagagga	gcaatcacac	agtgactgag	ttcatcctgc	tgggcttcac	cacagatcca	60
gggatgcaac	tgggcctctt	tgtggtgttc	ctgggtgtgt	actgtctgac	tgtggttagga	120
agtagcacc	tcacgtgtt	gatctgtaat	gactcccacc	tacacacacc	catgtatttt	180
gtcattggaa	atctgtcatt	tctggatctc	tgggtattctt	ctgtctacac	cccaaagatc	240
ctagtgcct	gcattctctga	agacaaaagc	atctcctttg	ctggctgcct	gtgtcagttc	300
ttctctgcca	ggctggccta	tagtgagtgc	tacctactgg	ctgccatggc	ttatgaccac	360
tacgtggcca	tctccaagcc	cctgctttat	gctcagacca	tgccaaggag	attgtgcatc	420
tgtttggttt	tatatcccta	tactgggggt	tttgtcaatg	caataatatt	aaccagcaac	480
acattcacat	tggatttttg	tggtgacaat	gtcattgatg	actttttctg	tgatgtccca	540
cccctcgtga	agctggcatg	cagtgtgaga	gtaccaggc	tgtgctgcac	ttccttctgg	600
cctccaatgt	catctcccct	actgtgctca	tccttgccctc	ttacctctcc	atcatcacca	660
ccatcctgag	gatccactct	acccaggggc	gcataaaagt	cttctccaca	tgctcctccc	720
acctgatctc	cgttacetta	tactatggct	ccattctcta	caactactcc	cggccaagtt	780
ccagctactc	cctcaagagg	gacaaaatgg	tttctacctt	ttatactatg	ctgttcccca	840
tgttgaatcc	catgatctac	agtctgagga	ataaagacat	gaaagacgct	ctgaaaaaat	900
tcttcaagtc	agcataatcc	aaagtc				926

<210> 618

<211> 936

<212> DNA

<213> Unknown (H38g467 nucleotide)

<220>

<223> Synthetic construct

<400> 618

atggacgggg	tgaatgatag	ctccttgacg	ggctttgttc	tgatgagcat	atcggaccat	60
ccccagctgg	agatgatctt	ttttatagcc	atcctcttct	cctatttgct	gaccctactt	120
gggaactcaa	ccatcatctt	gctttccgc	ctggaggccc	ggctccatac	acccatgtac	180
ttcttctca	gcaacctctc	ctccttgac	cttgtttctg	ctactagtct	agtcceccaa	240
atgctgatca	atttatgggg	accaggcaag	accatcagct	atggtggctg	cataaccag	300
ctctatgtct	tcctttggct	gggggccacc	gagtgcaccc	tgctggtggt	gatggcattt	360
gaccgctacg	tggcagtgtg	ccggcccctc	cgctacaccg	ccatcatgaa	ccccagctc	420
tgctggctgc	tggctgtgat	tgcttgctg	gggtggcttg	gcaactctgt	gatccagtca	480
acattcactc	tgcagctccc	attgtgtggg	caccggaggg	tggagggtatt	cctctgcgag	540
gtgcctgcca	tgatcaaact	ggcctgtggc	gacacgagtc	tcaaccaggc	tgtgctcaat	600
ggtgtctgca	ccttcttcac	tgagtcacca	ctaagcatca	tcgtgatctc	ctactgcctc	660
attgctcagg	cagtgtctgaa	aatccactct	gcagagggga	ggcgaaaggc	gttcaatacg	720
tgctctctcc	atctgtggt	ggtgttctct	ttctatggct	cagccagcta	tgggtatctg	780
cttccggcca	agaacagcaa	acaggaccag	ggcaagtcca	tttccctgtt	ctactcgctg	840
gtcacaccca	tgggtgaatcc	cctcatctac	acgctgcgga	acatggaagt	gaagggcgca	900
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<210> 619

<211> 247

<212> DNA

<213> Unknown (H38g468 nucleotide)

<220>

<223> Synthetic construct

<400> 619

ggtgagaggc	taaagacact	caacacatgt	gtgtcacata	tctatgcagt	gctgatcttc	60
tatgtgccta	tggttagtgt	gtccatgggt	catcgatttg	ggaggcatgc	tcctgaatat	120
gtgcacaagt	tcatgtctct	ttgtacctcc	aatgctctac	ccaattatct	attccatcaa	180
gactaaggag	attcgcagga	gactacacaa	gatgttattg	ggagctaagt	tctgatcaag	240
gaaaact						247

<210> 620

<211> 936

<212> DNA

<213> Unknown (H38g469 nucleotide)

<220>

<223> Synthetic construct

<400> 620

atggaagtgg	gaaattgcac	catcctgact	gaattcatct	tgttgggttt	ctcagcagat	60
tcccagtggc	agccgattct	atgttgagtg	tttctgatgc	tctatttgat	aaccttgta	120
ggaaacatga	ccttggttat	cttaatccga	actgattccc	acttgcatat	acctatgtac	180
tttttcattg	gcaatctgtc	ttttttggat	ttctggtata	cctctgtgta	tacccccaaa	240
atcctggcca	gttgtgtctc	agaagataag	cgcatttcct	tggctggatg	tggggctcag	300
ctgttttttt	cctgtgttgt	agcctacact	gaatgctatc	tcctggcagc	catggcatat	360
gaccgccatg	cagcaatttg	taacccattg	ctttattcag	gtaccatgtc	caccgccctc	420
tgtactgggc	ttgttgctgg	ctcctacata	ggaggatttt	tgaatgccat	agcccatact	480
gccaatacat	tccgcctgca	ttttttgtgt	aaaaatatca	ttgaccactt	tttctgtgat	540
gcaccaccat	tggtaaaaaat	gtcctgtaca	aacaccaggg	tctacgaaaa	agtcttgctt	600
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atcctcctgg	ctatcctgag	aatccactca	gcttcaggaa	gacacaaggc	attctccacc	720
tgtgcttccc	acctcatctc	agtcattgtc	ttctatggat	cattgttggt	tatgtattca	780
aggcctagtt	ccacctactc	cctagagagg	gacaaagtag	ctgctctggt	ctacaccgtg	840
atcaaccac	tgctcaacc	tctcatctat	agcctgagaa	acaaagatat	caaagagggc	900
ttcaggaaag	caacacagac	tatacaacca	caaaca			936

<210> 621

<211> 954

<212> DNA

<213> Unknown (H38g470 nucleotide)

<220>

<223> Synthetic construct

<400> 621

atgcctactg	taaaccacag	tggcactagc	cacacagtct	tccacttgct	gggcatccct	60
ggcctacagg	accagcacat	gtggatttct	atccattctt	tcatttccta	tgtaaccgcc	120
cttcttggga	acagcctgct	catcttcatt	atcctcacia	agcgagcct	ccatgaaccc	180
atgtacctct	tcctctgcat	gctggctgga	gcagacattg	tcctctccac	gtgcaccatt	240
cctcaggcct	tagctatctt	ctggttccgt	gctggggaca	tctccctgga	tcgttgcatc	300
actcagctct	tctcatcca	ttccaccttc	atctctgagt	cagggatctt	gctgggtgatg	360
gcctttgacc	actatattgc	catatgctac	ccactgaggt	acaccaccat	tcttacaaat	420
gctctgatca	agaaaatttg	tgtgactgtc	tctctgagaa	gttatggtac	aattttccct	480
atcatatttc	ttttaaaaag	attgactttc	tggcagaata	atattattcc	acacaccttt	540
tgtgaacaca	ttggcctagc	caaatatgca	tgtaatgaca	ttcgaataaa	catttggtat	600
gggttttcca	ttctaattgc	gacgggtggtc	ttagatgttg	tactaatttt	tatttccctat	660
atgctgatcc	tccatgctgt	cttccacatg	ccttctccag	atgcttgcca	caaagctctc	720
aacacatttg	gctcccatgt	ctgcatcatc	atcctctttt	atgggtctgg	catcttcaca	780
atccttacc	agaggtttgg	acgccacatt	ccaccttgta	tccacatccc	gttggttaat	840
gtctgcattc	tggctccacc	tatgctgaat	ccattatttt	atgggatcaa	aaccaagcaa	900
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<210> 622
 <211> 942
 <212> DNA
 <213> Unknown (H38g471 nucleotide)

<220>
 <223> Synthetic construct

<400> 622
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 tacttcctgc tggccacact gtcctttgct gacctctgtt tcgcctccgt cactgtgccc 240
 aagatgttgg ccaacttgtt ggcccatgac cactccatct cgctggctgg ctgcctgacc 300
 caaatgtact tcttctttgc cctgggggta actgatagct gtcttctggc ggccatggcc 360
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 gaccaccagc cctcttaag gctctcgctc tctgacacc accacatcca gctgctcatc 600
 ttaccagagg gcgcgcaggt ggtggctact cccttctgc tcatcctcgc ctcctatggg 660
 gccatcgag ctgcccgtgt ccagctgccc tcagcctctg ggaggctccg ggctgtgtcc 720
 acctgtggct cccacctggc tgtgtgagc ctcttctatg ggacagtcat tgcagtctac 780
 ttccaggcca catcccagc cgaggcagag tggggccgtg tggccactgt catgtacact 840
 gtagtcaccc ccattgctgaa ccccatcatc tacagcctct ggaatcgca tgtacagggg 900
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<210> 623
 <211> 946
 <212> DNA
 <213> Unknown (H38g472 nucleotide)

<220>
 <223> Synthetic construct

<400> 623
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 gtttccatcc tgggtaataa tatcatcctc tctctgatcc acacagatcc agccttacat 180
 gaacccatgt atatcttcc gtccatgttg gcagcctctg atctgggcct ctgtgcctct 240
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 ctcccgggac ctatcctcct gcagcagctg ctctttccca agatcagcgc tctctgtcac 540
 tgctactgcc tgcactgtga ccttgtgggg ttggcctgct cagacacca gatcaatagc 600
 ctgggttggcc tgggttccat cctcttctca ctgtgccttg actccttct catcatgctt 660
 tcatatgccc tgatcctatg aactgtgctg ggcattgcat cacctgggga gcggctcaag 720
 gcactcaaca cgtgtgtctc acacctctgc attgttctca tcttttattt gcccacacgg 780
 gctgtctgtc ttgcaccag taaagaagca tgactacct gctctggcag tgetcatggc 840
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<210> 624
 <211> 960
 <212> DNA
 <213> Unknown (H38g473 nucleotide)

<220>
 <223> Synthetic construct

<400> 624

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ctgaggaacc	tgtcatcat	cctggctgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctcggc	catggttccc	240
aagatgattg	tggacatgca	gtctcatagc	agagtcactc	cttatgcggg	ctgcctgaca	300
cggatgtctt	tcttgggtcc	ttttgcatgt	atagaagaca	tgctcctgac	tgcgatggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcaactacc	cagtcactcg	gaatcctcac	420
ctctctgtct	tcttagtttt	gggtgtcctt	ttccttagcc	tggtggattc	ccagctgcac	480
agtttagattg	tgttacaatt	cacctctctc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	agcttctcaa	ccttgcctgt	tctgacagcg	tcatcaatag	catattctta	600
tatttcgata	gtactatggt	tgggttttct	cccatttcaa	ggatcctttt	gtcttactat	660
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gtggtcaccc	ccatgctgaa	ccctttcctc	tatagcctga	gaaacagaga	cattcaaagc	900
gccctctgga	ggctgctgag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 625

<211> 985

<212> DNA

<213> Unknown (H38g474 nucleotide)

<220>

<223> Synthetic construct

<400> 625

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gcccgaggag	atcccacttt	tggattgctt	ttcccttctg	ctccatgtat	gccctggcag	120
tgctgggaaa	catggtggtg	ctgctagtgg	tacattcaga	gcctgtattg	caccagccca	180
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cccagatggt	ctttatccat	ggcttctcag	ctgtagaatc	tggtatactg	ctagcaatgg	360
cctttgaccg	ctacttagcc	atttgcctgg	ctctgcacta	tgggtcattg	ctctcccag	420
agtctgtagg	caagctgggg	gctgcagcgt	gcttcgtggt	ttgggactca	tgacccact	480
cacctgctta	ctggcaagac	tgagctactg	cagtcgagtg	gtggcccact	cctactgtga	540
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cactgctgcc	acactgggtg	tgggcaactg	ctccatctgt	attgctgtct	cctatggact	660
catcctccga	gctgtgttag	gtctttctct	caaggaggca	agggctaaga	cctttggcac	720
ttgtggctcc	cacctgggtg	tcatacttct	cttctacaca	ccaggactct	tctccttcta	780
cacacagcgg	tttggccagc	acgtgccccg	gcacatccac	atccttctag	ctgacctcta	840
cctggttgtg	ccacccatgc	tcaaccccat	catctatggc	atgaagacca	aacagatctg	900
ggatggggcc	ctccggcttc	tgaagtgggg	ccctgctcag	tcataaagtc	ttcaacccca	960
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<210> 626

<211> 989

<212> DNA

<213> Unknown (H38g475 nucleotide)

<220>

<223> Synthetic construct

<400> 626

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ataaggaacg	tgtcatcat	cctgggtgtg	agctctgact	cccacctcca	cacccccatg	180
tttttttctt	ctccaacgtg	tgggtgggctg	acatcagttt	cacgtcggcc	ggggttccca	240
agatgacggt	ggacatgcag	tcgcatagca	gagtcactta	ttatgcgggc	tgcatgactc	300
ggatgtcttt	tttcgtcctt	ttagcatgta	tagaagacat	gctcgtgtgt	gtgatggcat	360
aggagtgtct	tgtagccctg	tgtcgccctg	tgcaatacac	agttattgta	aatcctcacc	420

tgtgtgtttt	cagagttggg	gtgtcctttc	tccagagcgt	gttgtattcc	caggtgcaca	480
gataagtggt	gtcacaattc	acttttttca	agaatgtgga	aatctctcat	tttgtgtgtg	540
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atttcgatag	taatatgttt	ggttttcttc	ccatcacagg	gatctttttg	tcttaataata	660
aaagtgtccc	ctccattata	aggatttcat	cgtcagatgg	aaagtataaa	gctttctcca	720
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tggtcacccc	catgctgacc	cctttcatct	acagcgtgag	aaacagggac	attcaaagcc	900
ccctgtggag	tgtgtgcagc	agcacagtta	aatcttttga	tgtgtcccat	cttttttgtg	960
tgtgggtaag	aaagggcacc	cacattaaa				989

<210> 627

<211> 512

<212> DNA

<213> Unknown (H38g476 nucleotide)

<220>

<223> Synthetic construct

<400> 627

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tggggaacct	gctgcatcat	cctgggtgtg	agctctgact	cccacctcca	caccccatg	180
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caagttgatt	gtggacatcc	actcttacac	cagagacatc	tcctatgcac	gctgtctgac	300
tcacacacct	ctctttgcca	tttttgagg	cgtgggaaag	agacatgctc	ctgagagtga	360
tgggctatga	ccgcgttgta	gacatctgtg	accctctata	tcattcacac	gccatgaacc	420
cctgtgtctg	tggctctcta	gatttgtggt	ctcttttttt	tctcacactt	ttatacacc	480
acctgcacaa	ctcgattgcc	ttacacatga	cc			512

<210> 628

<211> 967

<212> DNA

<213> Unknown (H38g477 nucleotide)

<220>

<223> Synthetic construct

<400> 628

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ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
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atgattgcag	actttctggt	tgagcacaa	actatttctt	ttgatgcccg	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtg	tcctagtttc	catggcctat	360
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gcattcaactg	ttaatctgcc	attttgtggt	cctaataagg	tagatagttt	ttttctgtga	540
ccttcctcta	gtgaccaagt	tagcctgcat	agacacttat	gttgctcagc	tactaatagt	600
tgacagatagt	ggctttcttt	ctctgagttc	ctttctcttc	ttgggtgtct	cctacactgt	660
aatacttggt	acagtttagga	atagctcctc	tgtaagcatg	gtgaaggcct	gtccacatt	720
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actgaagagt	cggatcaga	agcttggtca	ggtttctgta	gtcataagaa	acgttctttt	960
cctagaa						967

<210> 629

<211> 942

<212> DNA

<213> Unknown (H38g478 nucleotide)

<220>

<223> Synthetic construct

<400> 629

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ggcaactgcc	tgattttact	cactgtccta	tcacctcac	accttctactc	tcgcacgtac	180
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caggtatatt	gccatatgta	aacctctccg	ctattcaaca	attatgagcc	aaagagtgtg	420
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tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
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<210> 630

<211> 595

<212> DNA

<213> Unknown (H38g479 nucleotide)

<220>

<223> Synthetic construct

<400> 630

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cataattttct	tgtgtgcect	ttctcaactc	ccccatcgtg	catgggtgtga	cactttcccc	180
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cagggaact	aaaagtgtcc	tgcgcgggcc	gcacggcagc	acggtgtaat	tttgatatct	540
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<210> 631

<211> 942

<212> DNA

<213> Unknown (H38g480 nucleotide)

<220>

<223> Synthetic construct

<400> 631

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attgtaggtg	acctcagcat	tctcactctg	gtgttttggg	agcctgctct	gcatcagccc	180
atgtactact	tctctcttat	gctcgtcttc	aatgatctgg	gagtgtcctt	ttctacactt	240
cccactgtga	tttctacttt	ctgcttcaac	tacaaccatg	ttgcgtttta	tgcttgccctg	300
gtccagatgt	tcttcatcca	cactttctcc	ttcatggagt	caggcatact	gctggccatg	360
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ttcccttttg	tggtgaaacg	actgcccttc	tgcaaaggca	atgttttgca	tcactcctac	540
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gggctcttgg	tgatcatttt	tacctatggg	atggactcaa	ctttcatcct	gctttcctac	660
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<210> 632

<211> 936

<212> DNA

<213> Unknown (H38g481 nucleotide)

<220>

<223> Synthetic construct

<400> 632

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gaccgctatg	tggccatttg	tgaccctctg	cgctatgcaa	ctgtgctcac	cactgaagtc	420
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tttgttcttg	tatccacctt	tggcatggac	ctgtttttta	tcttctcttc	ctatgtgctc	660
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tgtgtgtcac	atatcctggc	tgtacttgca	ttttatgtgc	caatgattgg	gggtctccaca	780
gtgcaccgct	ttgggaagca	tgtcccatgc	tacatacatg	tcctcatgtc	aaatgtgtac	840
ctatttgtgc	ctcctgtgct	caaccctctc	atttatagcg	ccaagacaaa	ggaaatccgc	900
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<210> 633

<211> 467

<212> DNA

<213> Unknown (H38g482 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(467)

<223> n = A,T,C or G

<400> 633

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aatgggatta	tcctggggct	catctacttg	gactctagac	tgacacacac	catgtatgtc	180
ttcctgtcac	acctggccat	tgtggacatg	tcctatgcct	cgagtactgt	ccctaagatg	240
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tttttgtatt	tggcgtttgc	tattacagag	tgtctgattt	tgggtgatgat	gtgctatgat	360
cggtatgtgg	caatctgtca	cccccttgca	atacaccnt	cattatgaac	tggagagtgt	420
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<210> 634

<211> 988

<212> DNA

<213> Unknown (H38g483 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(988)

<223> n = A,T,C or G

<400> 634

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gaatgggggc atctttggga ttatctgcct ggactctaag cttcacacac ccatgtactt      180
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gttggaacac ctaatgaacc agaaaagaac catctccttt gttccatgca taatgcagac      300
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cacgatcctg gttctcacgt cctggctcatg tgggtttgcc ctgtccctgg tacatgaaat      480
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cctcggggcc atcctgaaga tccagacaaa ggaggggcgc ataaaggcct tctccacctg      720
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cccagactct aatcaacgag aggagcagga gaaaatgctg tccctgtttc acagtgtctt      840
gaaccaaatg ctgaaccccc tgatctacag cctgaggaat gctcagttga agggcgccct      900
ccacagagca ctccagagga agaggtccat gagaacggtg tatgggcttt gcctttaaaa      960
catgtggttt gctgaagcaa gaattttg

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<210> 635

<211> 941

<212> DNA

<213> Unknown (H38g484 nucleotide)

<220>

<223> Synthetic construct

<400> 635

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aatggcatga tcttgggact catctgtctg gaccacattc tgctacccc catgtacttc      180
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ttggcaaatc tgatgaacaa gaaaagaacc atctcctttc ttccatgcat aatgcagacc      300
tatttgtatt tctcttttgc tgctacagag tgtctgattt tgggtggtgat gtcctatgat      360
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tcccagactc taatcaacga gaggagcagg agaaaatgct gtccctgttt cacagtgtct      840
tgaacccaat tctgaacccc ctgatctaca gtctgaggaa tgctcaggtg aaggcgcccc      900
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<210> 636

<211> 1002

<212> DNA

<213> Unknown (H38g485 nucleotide)

<220>

<223> Synthetic construct

<400> 636

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gtgagacata	ccaatgagag	caacctagca	ggtttcatcc	ttttaggggt	ttctgattat	120
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gggaatacca	ccatcattct	ggtttctcgt	ctggaacca	agcttcata	gccgatgtat	240
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gtccctgtgc	tcatcaagct	ggcttgtgtg	ggcaccacgt	ttaacgaggc	tgagcttttt	660
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gtaacccgca	tgcttaaccc	tcttatttat	accttgagga	tcaaggagggt	gaaaggggca	960
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<210> 637

<211> 510

<212> DNA

<213> Unknown (H38g486 nucleotide)

<220>

<223> Synthetic construct

<400> 637

atggaaggca	acaagacatg	gatcacagac	atcaccttgc	cgcgattcca	ggttgggtcca	60
gcactggaga	ttctcctctg	tggacttttc	tctgccttct	atacactcac	cctgctgggg	120
aatggggatca	tccttgggat	tatctgcctg	gactgtgaagc	ttcacacacc	catgtacttc	180
ttcctctcac	acctggccat	tgttgacata	tcctatgctt	ccaactatgt	ccccagatg	240
ctgacgaatc	ttatgaacca	ggaaagcacc	atctcctttt	ttccatgcat	aatgcagaca	300
ttcttgtatt	tggcttttgc	tcacgtagag	tgtctgattt	tgggtggtgat	gtcctatgat	360
cgctatgcgg	acatctgcca	ccccttaagt	tacaatatcc	tcattgagctg	gagagtgtgc	420
actgtcctgg	ctgtggcttc	ctgggtgttc	agcttctctc	tggctctgggt	cccgtttagt	480
tctcagtcgc	tgaggtgcat	gaacgtactg				510

<210> 638

<211> 924

<212> DNA

<213> Unknown (H38g487 nucleotide)

<220>

<223> Synthetic construct

<400> 638

atggacacag	gcaacaaaac	tctgccccag	gactttctct	tactgggctt	tcctgggtct	60
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ggtaattgtg	ctatcttgat	gttgggtgagc	acctcccatc	agttgcatac	ccccatgtac	180
ttctttctga	gcaacctctc	cttctgtggag	atgttggtata	ccacagcagc	agtgcacaaa	240
gcactggcca	tcctactggg	gagaagtcag	accatatcat	ttacaagctg	tcctttgcag	300
atgtactttg	ttttctcatt	aggctgcaca	gagtaacttc	tcctggcagc	catggcttat	360
gaccgctgtc	ttgccatctg	ctatccttta	cactacggag	ccatcatgag	tagcctgctc	420
tcagcgcagc	tggccctggg	ctcctgggtg	tgtgggttctg	tggccattgc	agtgcacaca	480
gccctcatca	gtggcctgtc	cttctgtggc	ccccgtgcca	tcaaccactt	cttctgtgac	540
attgcacctt	ggattgccct	ggcctgcacc	aacacacagg	cagtagagct	tgtggccttt	600
gtgattgctg	ttgtgggttat	cctgagttca	tgccctcatca	cctttgtctc	ctatgtgtac	660
atcatcagca	ccatcctcag	gatccccctc	gccagtgggc	ggagcaaagc	cttctccacg	720
tgtcctctgc	atctcaccgt	ggtgctcatt	tggtaggggt	ccacagtttt	ccttcacgtc	780
cgcacctcta	tcaaagatgc	cttggatctg	atcaaagctg	tccacgtcct	gaacactgtg	840
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ctgctgaaga	aatggaaggg	aaaa				924

<210> 639
 <211> 669
 <212> DNA
 <213> Unknown (H38g488 nucleotide)

<220>
 <223> Synthetic construct

<400> 639
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 atctgtctgg accacagtct gcacactctc atacttcttc ctctcacacc tggccgtcat 180
 tgacatggcc tatgcttcca acaatgttcc caagatgctg gtggatcttg caaactagaa 240
 aagcaccatg tgcttttttc catgcataat gcagacattc ttgtatttgg cttttgctca 300
 catagagtgt ctgattttgg tggttttgtc ctatgatcgc tatgtggcca tctgccaccc 360
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 ggtgttcagc ttctctctgg ctctgggtcca tttagttctc attctgaggc tgccttcag 480
 tgggctcatg aaatcaacca ctactgtgaa atcctgtctg tcctcaagtt ggcctgtgct 540
 gacacctggc tcaaccaggt ggtcatcttt gcaagctgca tgttcatcct ggtaggggtga 600
 ctctgcttgg tgctgggtctc ttacttgggc atctggcggc atctgagatc agttgcgaag 660
 ccaaaaagg 669

<210> 640
 <211> 927
 <212> DNA
 <213> Unknown (H38g489 nucleotide)

<220>
 <223> Synthetic construct

<400> 640
 atgggattgg gcaatgagag ttccctaattg gatttcatcc ttctaggctt ctcagaccac 60
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 ggaaacttca ccataatcat catctcatat ctggatcccc ctcttcatac cccaatgtac 180
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 acctagttta acttgcaaag accaaagaag acgatcactt acgggtggtg tgtggcgcaa 300
 ctctatatatt ctctggcact gggctccact gaatgtatcc tcttggctga catggccttg 360
 gatcggtaca ttgctgtctg caaacccctc cactatgtag tcatcatgaa cccacggctt 420
 tgccaacagc tggcatctat ctctgggtc agtggtttgg ctagttccct aatccatgca 480
 acttttacct tgcaattgcc tctctgtggc aaccataggc tggaccattt tatttgcgaa 540
 gtaccagctc ttctcaagtt ggcttgtgtg gacaccactg tcaatgaatt ggtgcttttt 600
 gttgttagtg ttctgtttgt tgtcattcca ccagcactca tctccatctc ctatggcttc 660
 ataactcaag ctgtgctgag gatcaaatca gtagaggcaa ggcacaaagc cttcagcacc 720
 tgctcctccc accttacagt ggtgattata ttctatggca ccataatcta cgtgtacctg 780
 caacctagtg acagctatgc ccaggaccaa gggaagttta tctccctctt ctacaccatg 840
 gtgaccccca ctttaaattcc tatcatctat actttaagga acaaggatat gaaagaggct 900
 ctgaggaaac ttctctcggg aaaattg 927

<210> 641
 <211> 1012
 <212> DNA
 <213> Unknown (H38g490 nucleotide)

<220>
 <223> Synthetic construct

<400> 641
 tctacagacc cacagaatct aacagatgtc tctgtattcc tcctcctaga actacagagg 60
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 tggggaacct gctcatcatc ctggccatca gccgtactc ccacctcac atccccatgt 180

actttcttct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcattct	ctatgcaggc	tgcttgactc	300
agatgtctct	ctttgccatt	tttgaggcca	tggaagagag	acatgctcct	gagtgtgatg	360
gcctatgacc	ggttttagc	catctgtcac	cctctatata	attcagccat	catgaaccg	420
tgtttctgtg	gcttcctagt	tttggtgtct	tttttttct	gtcctcagtc	ttttagactc	480
ccagctgcac	aacttgattg	ccttacaagt	gacctgcttc	aaggatgtgg	aaattcctaa	540
tttcttctgt	gaccttctc	aactcccca	tcttgcatgt	tgtgacacct	tcaccaataa	600
gataatcatg	tatttcctg	ctgccatatt	tggttttctt	cccatctcag	ggaccctttt	660
ctcttactct	aaaattgttt	cctccattct	gaggggttca	tcatcagggtg	ggaagtataa	720
agccttctcc	acctgtgggt	ctcacctgtc	agttgtttgc	tgagtttatg	gaacaggcgt	780
tgagggttac	ctcagttcag	atgatgtgtc	atcttcccc	agaaagggtg	cagtggcctc	840
agtgatgtac	acgggtggta	ccccatgcc	gaacccttc	atctacagcc	tgagaaacag	900
ggatattaaa	agtgtcctgc	ggcgcccgca	cggcagcaca	gtctaattct	aatatcttct	960
tatctgttcc	attccttttg	tagtgtgggt	taaaaaggc	agaaagggtca	aa	1012

<210> 642

<211> 879

<212> DNA

<213> Unknown (H38g491 nucleotide)

<220>

<223> Synthetic construct

<400> 642

atgggatttt	cgaattcctg	ggatattcag	attgtacatg	ctgctctatt	cttcttagtt	60
tacctggcag	ctgtcatagg	aaatctccta	atcatcatat	ttaccactct	ggatgttcac	120
ctccaaaccc	caatgtattt	ctttttgaga	aacttgtctt	tcttagattt	ttgttacatc	180
tctgtcacaa	ttccaaaatc	tattgttagt	tccttgactc	atgatacttc	catttctttc	240
tttgggtgtg	ctctgcaagc	cttctttttc	atggacttgg	caactacgga	ggtagccatc	300
cttacagtga	tgtcctatga	ccgctatatg	gccatctgcc	ggcctttaca	ttatgaggte	360
atcataaacc	aagggtgtctg	tctgaggatg	atggccatgt	cgtgggtcag	tggtgtgatc	420
tgtggattca	tgcattgtgat	agcaacattc	tcattaccat	tctgtgggcg	caatagaata	480
cgtcaatttt	tctgtaatat	tcacacagctc	ctaagcctct	tagaccccaa	agtaattacc	540
attgagattg	gagtcattgt	ttttggtaca	agtcttgtga	taatctcctt	tggtgttaatt	600
actctctcct	acatgtacat	ttttctgtgc	atcatgagga	ttccttctaa	ggagggtaga	660
tcaaaaacat	tttctacctg	cattccacat	cttgtgggtg	taacactctt	tatgatattc	720
ggcagcattg	cctatgtgaa	gccaatttca	aattctcccc	cgttcttgga	tgttttcctg	780
tctgcgttct	acacagtcgt	gcccccgacc	ctgaaccccg	tcattctatag	tctgaggaat	840
agggacatga	aggcagccct	gagaaggcag	tgtggtccc			879

<210> 643

<211> 1020

<212> DNA

<213> Unknown (H38g492 nucleotide)

<220>

<223> Synthetic construct

<400> 643

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tcttccccaa	caagtgtggt	cttcttctta	gacaatttgt	cattttcatt	atgagtgtaa	120
cagaaaatac	gctcatgata	ctcctcatte	gcagtgaact	cgcactccac	actccaatgt	180
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aggatattct	gtccctcacc	ctcctgggtg	gtgagtgcct	tctcctgggt	gcaatgtcct	360
gtgatcgcta	tgtggctatc	tgccacccgc	tgccgtatcc	gattcttatg	aaggagtatg	420
ccagcgctct	catggctgga	ggctcctggc	tcattggggg	tttcaactcc	acagtccaca	480
cagcttatgc	actgcagttt	cccttctgtg	gctctagggc	aattgatcac	ttcttctgtg	540
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tgatgaaaaa	tatgctcaaa	agtaactttc	tgacaaaaaa	aatgaatagg	aaaattcctg	960
aatgtgtgtt	ctgtctattt	ctatgtttaa	tgccctgaagg	atactcatga	gaggtttcct	1020

<210> 644

<211> 932

<212> DNA

<213> Unknown (H38g493 nucleotide)

<220>

<223> Synthetic construct

<400> 644

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gggaacgccc	tcctcatagg	gctgaacgtg	ctgcaccctc	gcctgcacaa	ccccatgtac	180
ttctcagcaa	cctctccctc	atggacatct	gcggcacctc	ctcctttgtg	cctctcatgc	240
tagacaattt	cctggaaacc	cagaggacca	tttccctccc	tggtctgtgc	ctgcagatgt	300
acctgaccct	ggcgctggga	tcaacggagt	gcctgtctgt	ggctgtgatg	gcataatgacc	360
gttatgtggc	tatctgccag	ccgcttaggt	acccagagct	catgagtggg	cagacctgca	420
tgcagatggc	agcgctgagc	tgggggacag	gctttgccaa	ctcactgcta	cagtccatcc	480
ttgtctggca	cctccccctc	tgtggccacg	tcatcaacta	cttctatgag	atcttggcag	540
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ccgtccctgac	actggccccc	ctcttgetca	tctgcctgtc	ttaccttttc	atcctgtctg	660
ccatcccttag	ggtaccctct	gctgcaggcc	ggtgcaaagc	cttctccacc	tgctcagccc	720
accgcacagt	ggtggtggtt	ttttatggga	caatctcctt	catgtacttc	aaacccaagg	780
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tgaaccccat	catttacagc	ctgaggaatg	cagaggtgaa	agctgccgtc	ctaactctgc	900
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<210> 645

<211> 957

<212> DNA

<213> Unknown (H38g494 nucleotide)

<220>

<223> Synthetic construct

<400> 645

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ttgggcaatg	gcatacatcat	tctggtctcc	catacagatg	tgacacctcca	cacacctatg	180
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cagctcctgg	ctaacctctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtgggtc	300
cagttctata	tctccatttg	gctgggggca	accgagtgtg	tcctgctggc	caccatgtcc	360
tatgaccgct	acgtgccc	ctgcaggcca	ctccattaca	ctgtcattat	gcataccacag	420
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tacctggcca	gctttgtctt	tgttgtcctg	cctctggggc	tcactctggt	ctcttacggc	660
cacattgccc	gggcccgtgt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tgtggtgtct	ctgtttttacg	ggagcatcat	cttcatgtat	780
ctccagccag	ccaagagcac	ctcccatgag	cagggcaagt	tcatagtctt	gttctacacc	840
gtagtacttc	ctgcgtgtaa	cccacttatt	tacaccctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatggtatt	agagaactgc	tgtggctctg	caggcaagct	ggcgcaa	957

<210> 646

<211> 792

<212> DNA

<213> Unknown (H38g495 nucleotide)

<220>

<223> Synthetic construct

<400> 646

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atggacgtga	tgctggtttc	caccactgtg	cccaaaatgg	cggctgacta	cttgaccgga	180
agtaaggcca	tctcccgcgc	tggtgtgggt	gcgcagatct	tcttccctcc	cacactgggt	240
ggtggagagt	gcttcctctt	agcagccatg	gcctatgacc	gctatgcggc	tgtctgccac	300
ccactccgat	atcccactct	catgagctgg	cagctgtgcc	tgaggatgaa	cctgtcgtgt	360
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aaccacgaca	aggttgtgtc	agccttctat	actatgttca	cccctttact	aaacccccctc	780
atctacagtg	tg					792

<210> 647

<211> 662

<212> DNA

<213> Unknown (H38g496 nucleotide)

<220>

<223> Synthetic construct

<400> 647

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atgatgctgg	gtcccaaccga	gtgcgtcctc	ctgggtgtga	tgtcccatga	ccgctatgtg	180
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gtgactgtgg	cctgggtgctg	tggtctccta	aactccttca	tcagtgtgtc	tcagacgatg	300
cagctctccc	ggtgtggacg	tcgcaggggtg	gaccacttcc	tgtgtgagat	gcctgtctct	360
attgccatgt	cttgtgagga	aaccatgctg	gtagaagcga	ttcacctttg	ccctgggggt	420
ggctctcctc	ctgggtgccgc	tctccctcat	cctcatctcc	tacggcgtga	ttgcagccgc	480
ggtgctgagg	atgaagtcag	cagcagggcg	aaagaaagcc	ttccacacct	gctcttctca	540
cctcacagtg	gtctctctct	tctacggaac	catcatctac	ggtgtacctg	aagccggcca	600
acagctactc	ccaagatcag	gggaagtcc	tgactctctt	ctacaccatc	gtcattccca	660
gc						662

<210> 648

<211> 936

<212> DNA

<213> Unknown (H38g497 nucleotide)

<220>

<223> Synthetic construct

<400> 648

atggagccgc	tcaacagaac	agaggtgtcc	gagttctttc	tgaaaggatt	ttctggctac	60
ccagccctgg	agcatctgct	cttccctctg	tgtcagccca	tgtacctggg	gacctcctg	120
gggaacacag	ccatcatggc	ggtgagcgtg	ctagatatcc	acctgcacac	gcccggttac	180
ttcttcctgg	gcaacctctc	taccctggac	atctgctaca	cgccacacct	tgtgectctg	240
atgctgggtc	acctcctgtc	atcccgggaag	acctctcctt	ttgctgtctg	tgccatccag	300
atgtgtctga	gcctgtccac	gggtccacg	gagtgctgc	tactggccat	cacggcctat	360
gaccgctacc	tgccatctg	ccagccactc	aggtaccacg	tgctcatgag	ccaccggctc	420
tgcgtgctgc	tgatgggagc	tgctgggtc	ctctgcctcc	tcaagtcggg	gactgagatg	480
gtcatctcca	tgaggctgcc	cttctgtggc	caccacgtgg	tcagtcactt	cacctgcaag	540

atcctggcag	tgctgaagct	ggcatgcggc	aacacgtcgg	tcagcgaaga	cttcctgctg	600
gcgggctcca	tcctgctgct	gcctgtaccc	ctggcattca	tctgcctgtc	ctacttgctc	660
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tgcttggcac	acctggctgt	agtgtctgct	ttctacggca	ccatcatctt	catgtacttg	780
aagcccaaga	gtaaggaagc	ccacatctct	gatgaggtct	tcacagtcct	ctatgccatg	840
gtcacgacca	tgctgaacct	caccatctac	agcctgagga	acaaggaggt	gaaggaggcc	900
gccaggaagg	tgtggggcag	gagtcggggc	tccagg			936

<210> 649

<211> 940

<212> DNA

<213> Unknown (H38g498 nucleotide)

<220>

<223> Synthetic construct

<400> 649

atggaaaggg	gaaattggac	attgggtgact	gagtttatct	ttgtggggat	accaaccacc	60
agagcccttg	ggggcctcct	ctttgtgatt	ttttatcagc	ctatttggtg	acagtccttg	120
gaaacaccct	tattattatc	ctgattcttg	tggattacag	gctccactca	cccatgtatt	180
tcttcctcag	caatctctct	ttcagtgaag	cattaaccat	aacctgtgct	gttcctaaga	240
tgctggaggg	cttcccgtcg	gaaaggaaga	gcatacacaag	tggcgaatgc	tctgcacagt	300
cctattttcta	ttttctttcc	ggatgcactg	agtttatctc	ttttgctgtc	atgtccctatg	360
accgctatgt	ggccatttgc	agtcctcttc	agtaccctgc	aattatgacc	agtcactctc	420
gtgcccacct	cgtcatcctc	tcctgggtgg	gtggctttct	cctcatgctc	ccatccacca	480
tcctcaaggg	aggactgcca	cactgtggtc	ccaacgtgat	tgagcacttt	ttctgtgaca	540
gcgcccctct	cctccacctg	gcctgtgctg	acattcgtgc	tattgagctg	ttggactttc	600
tcagctcact	ggctctgatc	ctcagctccc	tctcactcac	agtgggtctc	tatgtttaca	660
tcattctccac	cattctgaag	ataccctcag	gccaaaggtca	acgcaaagcc	tttgccacct	720
gtgcctctca	cttcacggtg	gtctccgtgg	gctatgggat	ctccatcttt	gtctatgttc	780
acccctcaca	gaagagcagc	ctgcacctca	acaagatcct	ctttatcctc	tccagcatca	840
tcacaccctc	cctgaatccc	ttcgtcttca	gtctgtggaa	tgaacccatg	aaagatgcac	900
tgaaggacgc	ctcggccgga	ggacagagct	tgctcaaagg			940

<210> 650

<211> 927

<212> DNA

<213> Unknown (H38g499 nucleotide)

<220>

<223> Synthetic construct

<400> 650

atggcaaate	tcacaatcgt	gactgaattt	atccttatgg	ggttttctac	caataaaaaat	60
atgtgcattt	tgcattcgat	tctcttcttg	ttgatttatt	tgtgtgccct	gatggggaat	120
gtcctcatta	tcatgatcac	aactttggac	catcatctcc	acacccccgt	gtattttctc	180
ttgaagaate	tatctttctt	ggatctctgc	cttatttcag	tcacggctcc	caaactctatc	240
gccaatctct	tgatacacaa	caactccatt	tcattccttg	gctgtgtttc	ccaggctctt	300
ttgttgcttt	cttcagcatc	tgcagagctg	ctctcctca	cgggtgatgc	ctttgaccgc	360
tatactgcta	tatgtcaccc	tctgcactat	gatgtcatca	tggacaggag	cactgtgtgc	420
caaagagcca	ctgtgtcttg	gctgtatggg	ggctcgattg	ctgtgatgca	cacagctggc	480
accttctcct	tatcctactg	tgggtccaac	atgggtccatc	agttcttctg	tgacattccc	540
cagttattag	ctatttcttg	ctcagaaaat	ttaataagag	aaattgcact	catccttatt	600
aatgtagttt	tggatttctg	ctgttttatt	gtcatcatca	ttacctatgt	ccacgtcttc	660
tctacagtca	agaagatccc	ttccacagaa	ggccagtcaa	aagcctactc	tattttgcctt	720
ccacacttgc	tggttgtggt	atttcttttc	actggattca	ttgcttatct	gaagccagct	780
tcagagtctc	cttctatctt	ggatgctgta	atttctgtgt	tctacactat	gctgccccca	840
acctttaate	ccattatata	cagtttgaga	aacaaggcca	taaagggtggc	tctgggggatg	900
ttgataaagg	gaaagctcac	caaaaag				927

<210> 651

<211> 942
 <212> DNA
 <213> Unknown (H38g500 nucleotide)

<220>
 <223> Synthetic construct

<400> 651
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 ggcaacaccg ttcttctctt cttgatccgt gtggactccc ggctccacac acccatgtac 180
 ttectgtca gccagctctc cctgtttgac attggctgtc ccatggtcac catccccaag 240
 atggcatcag actttctgcg gggagaagggt gccacctcct atggagggtg tgcagctcaa 300
 atattcttcc tcacactgat ggggtgtggct gagggcgtcc tgttggctcct catgtcttat 360
 gaccgttatg ttgctgtgtg ccagccctcg cagtatcctg tacttatgag acgccaggta 420
 tgtctgtgta tgatgggctc ctctgggtg gtagggtgtg tcaacgcctc catccagacc 480
 tccatcaccc tgcattttcc ctactgtgcc tcccgattg tggatcactt cttctgtgag 540
 gtgccagccc tactgaagct ctctgtgca gatacctgtg cctacgagat ggcgctgtcc 600
 acctcagggg tgcgtatcct aatgctccct ctttccctca tcgccacctc ctacggccac 660
 gtgttgacag ctgttctaag catgcgctca gaggaggcca gacacaaggc tgcaccacc 720
 tgcctctcgc acatcacggt agtggggctc ttttatgggt cgcgcgtgtt catgtacatg 780
 gtgccttgcg cctaccacag tccacagcag gataacgtgg tttccctctt ctatagcctt 840
 gtcaccccta cactcaaccc cttatctac agtctgagga atccggagggt gtggatggct 900
 ttgggtcaaag tgcttagcag agctggactc agggcaaatgt gc 942

<210> 652
 <211> 936
 <212> DNA
 <213> Unknown (H38g501 nucleotide)

<220>
 <223> Synthetic construct

<400> 652
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 tgggaacttc aaattttctt ctttgtgaca ttttccctga tctacgggtg tactgtgatg 120
 ggaaacattc tcattatgggt cacagtgaca tgtaggtcaa cccttcattc tcccttgtag 180
 tttctccttg gaaatctctc ttttttgac atgtgtctct ccaactgccac aacacccaag 240
 atgatcatag atttgctcac tgaccacaag accatctctg tgtggggctg cgtgaccag 300
 atgtttctca tgcacttctt tgggggtgct gagatgactc ttctgataat catggccttt 360
 gacaggtagt tagccatag taaaccctg cactatagga caatcatgag ccacaagctg 420
 ctaaaggggt ttgcgatact ttcatggata attgggtttt tacactccat aagccagata 480
 gttttaacaa tgaacttgcc tttctgtggc cacaatgtca taaacaacat attttgtgat 540
 cttcccttg tgatcaagct tgcttgcat gaaacataca ccctggaatt atttgtcatt 600
 gctgacagcg ggcgtctctc tttcacctgt ttcactctct tgcctgtttc ttacattgtc 660
 atcctgggtca gtgtaccaaa aaaatcatca catgggctct ccaaggcgt gtccacattg 720
 tctgccaca tcattgtgggt cactctgttc tttggacctt gtatttttat ctatgtttgg 780
 ccattcagta gtttggcaag caataaaact cttgccgtat tttatacagt tatcacacc 840
 ttactgaatc cgagtattta taccctgaga aataagaaaa tgcaagaggc cataagaaaa 900
 ttacggttcc aatatgttag ttctgcacag aatttc 936

<210> 653
 <211> 972
 <212> DNA
 <213> Unknown (H38g502 nucleotide)

<220>
 <223> Synthetic construct

<400> 653
 atgccaacag acaaacaaat ggaaaaacaa aatcagtcca tgggtgcctga atttattttg 60

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ttgggattca aaaatctcat gagctacaga tttcttttat cttatttttc cattctctac 120
atatccataa ttaagtaacc taatcattat cttttagtg aaactggatc ctcaattgca 180
ttctcccatg tacttcttac tggccaacct gtcactact gatatgcccc tggcctcctt 240
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ctgcatgaca tagagatttt tccttcactt ttttaagtga agtgagatgg ttttactctt 360
agccatggca atcgatagat aatttgccat atgcaaacc ctcattaca agtccattgc 420
atcggaactg ctctcgctc ctggactatg gatttcatgc acaccatgag ccaaattgtt 480
ctcacagtga ctttgccatt ctgtggtctc agtggttggtg atatttttgt gtgtgtgtga 540
tctgccttgt gataaaactt gcctgtacag acacttacat cttggagcta tgagtcattg 600
cagacagtgg actactttct ttgctgtgtt tcatgtttct gttaatctcc tatagcaccg 660
tcctgattat tatttgacat cattcctcca gggggtcttc caaaactctg tccacgcttt 720
cagccacat tatggtggtg gtactgttct ttggagcttg catctttacc tgtgaaagac 780
cattcagcac tgtctccatt gatgtctgtg ttttaacta tttttgctcc ccttttaaat 840
ccaatcatct acacattcag gaataacgac atgaagaaag cattaagaaa aatgaagatt 900
aactttgtga gttctagatc aacttgataa ctaaaatatt ataatcacta aaagcatcat 960
cattattgtt gt 972

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<210> 654

<211> 936

<212> DNA

<213> Unknown (H38g503 nucleotide)

<220>

<223> Synthetic construct

<400> 654

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cggaagatcc agctcctcct ctctcctttt ttctcagtg tctatgtgtc aagcctgatg 120
ggaaatctcc tcattgtgct aactgtgacc tctgaccctc gtttacagtc ccccatgtac 180
ttctgctggt ccaacctttc catcatcaat ttggtatttt gtctctccac agctcccaag 240
atgatttatg accttttcag gaagcacaag accatctctt ttgggggctg tgtagtccag 300
atcttcttta tccatgcagt tgggggaact gagatggtgc tgctcatagc catggctttt 360
gaccgatatg tggccatatg taagcctctc cactacctga ccatcatgaa cccacaaagg 420
tgcattttgt ttttagtcat ttctgggatt ataggtatta ttactcagt gattcagttg 480
gcttttgttg tagacctgct gttctgtggc cctaataaat tagatagttt cttttgtgat 540
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gccaatagtg gatttatttc tctggcttct tttttaattc tcataatctc ttacatcttt 660
attttgggtga ctgttcagaa aaaatcttca ggtggtatat tcaaggcttt ctctatgctg 720
tcagctcatg tcattgtggt ggttttgggc tttgggcat taatcttttt ctatattttt 780
ccatttccca catcacatct tgataaattc cttgccatct ttgatgcagt tatcactccc 840
gttttgaatc cagtcactta tacttttaga aataaagaga tgatgggtggc aatgagaaga 900
cgatgctctc agtttgtgaa ttacagtaaa atcttt 936

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<210> 655

<211> 967

<212> DNA

<213> Unknown (H38g504 nucleotide)

<220>

<223> Synthetic construct

<400> 655

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tgggagactc aagatttttc ttttttgctt ttcttgtctt ttctatgtgt ccggtgtgat 120
ggcaaacctc attgtagtgg tcattgtaac ctctgacct tacttgact cctccttgta 180
tattttgctg gccaacctct ctgtcattga tctcacattt tgctccattg cagcacgcaa 240
gatgatttgt gatattttca ggaaacagaa agtcatttcc ttttggggct gtgtagctca 300
gatcttcttt agccatgctg ttgggggcac tgagatggtg ctgctcatag ccatggcctt 360
tgacagatat gttgccgtat gtaagccct tcaactcctg accatcatgc atccaagaat 420
gtgcattttg attctagtgg ctctctgggc cattggtctc attcactcat tgggtccaatt 480
gtcttttgta gtaaaactgc cttctgtgg ccctaattgt ttggacagct tttactgtga 540

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catacctcag	ctcatcaaac	ttgcttgcac	aaatacctat	aaactgcagt	tcatgggttac	600
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cattctggcc	actcttcaga	aacactcctc	aggaggctca	tccaaggctg	tctctactct	720
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gccctctcct	ccaacacatc	tgaataaatt	tctagccata	tttgatgcca	ttttcactcc	840
ttttctgaat	ccagtcattc	acacattcag	gaacagggaa	atgaagattg	caataaggag	900
agtgttcggg	caatttatgg	gttttagaaa	aactacttaa	gtggctttat	taaaacacag	960
aattttcc						967

<210> 656

<211> 873

<212> DNA

<213> Unknown (H38g505 nucleotide)

<220>

<223> Synthetic construct

<400> 656

atggttgggg	caaatcactc	cgtgggtgca	gagtttgtgt	tcctgggact	caccaattcc	60
tgggagatcc	gacttctcct	ccttggtgtc	tcctccatgt	tttacatggc	cagtatgatg	120
ggaaactctc	tcattttgct	cactgtgact	tctgaccctc	acttgcactc	ccccatgtat	180
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gccaacagtg	gattcatctc	tctgggctcc	ttcttcatac	tgatcatttc	ctatgtgggtc	660
atcattctca	ctgttctgaa	acactcttca	gtgggtttat	ccaaggtctc	gtccaccctt	720
tcagctcacg	tcagtgtggt	agttttgttc	tttggctcct	tgatttttgt	ctatacgtgg	780
ccatctccct	ccacacacct	ggataagttt	ctggccatct	ttgatgcagt	tctcactcct	840
gtttttaaatc	ctatcatcta	cacattcagg	aat			873

<210> 657

<211> 936

<212> DNA

<213> Unknown (H38g506 nucleotide)

<220>

<223> Synthetic construct

<400> 657

atgaatggaa	tgaatcactc	tgtgggtatca	gaatttgtat	tcatgggact	caccaactca	60
cgggagattc	agcttctact	ttttgttttc	tctttgttgt	tctactttgc	gagcatgatg	120
ggaaactctg	tcattgtatt	cactgttaacc	atggatgctc	atctgcactc	ccccatgtat	180
ttcctcctgg	ctaacctctc	aatcattgat	atggcatttt	gctcaattac	agcccctaag	240
atgattttgtg	atattttcaa	gaagcacaag	gccatctcct	ttcgggggatg	tattactcag	300
atcttcttta	gccatgctct	tggggggcact	gagatgggtgc	tgctcatagc	catggccttt	360
gacagataca	tggccatatg	ttaaactctc	cactacctga	ccatcatgag	cccaagaatg	420
tgtctatact	ttttagccac	ttcctctatc	attggcctta	tccactcatt	ggtccaatta	480
gtttttgtgg	tagattttacc	tttttgtggt	cctaatatct	ttgacagttt	ttactgtgat	540
ctccctcggc	tcctcagact	tgccctgtacc	aacacccaag	aactggagtt	catgggtcact	600
gtcaatagtg	gactcatttc	tgtgggctcc	tttgtcttgc	tggttaatttc	ctacatcttc	660
attctgttca	ctgtttggaa	acattcttct	gggtggtctag	ccaaggccct	ctctaccctg	720
tcagctcatg	tcactgtggt	catcttggtc	tttgggccac	tgatgttttt	ctacacatgg	780
ccttctccca	catcacacct	ggataaatat	cttgcatttt	ttgatgcatt	tattactcct	840
tttctgaatc	cagttatcta	cacattcagg	aacaaagaca	tgaagtggtc	aatgaggaga	900
ctgtgcagtc	gtcttgcgca	ttttacaaag	attttg			936

<210> 658

<211> 980
 <212> DNA
 <213> Unknown (H38g507 nucleotide)

<220>
 <223> Synthetic construct

<400> 658
 atggagcaaa ggaaaaatgt gactgagttt gtccttgtgg ggctcactca gagccccag 60
 ggacagaaaa tattatttct tgtgttcttg ctcatctacg ttgtgacaat ggtaggcaac 120
 atattcattg ttgtgactgt ggtggctcagc ccaacttttg atgccccatg tacttcttcc 180
 ttggctactt atcatttatg gatgctgttc attctactac agttaccca aatatgatta 240
 tagacttact ctatgagaag aaaaccattt cgttccaagc ttgattacc agatttttat 300
 aggacaccta tttgggggtg ctgagatttt actccttgtt gtcattggcct atgatggcta 360
 cgtgaccatc tgcaaacccc tgcattattt gaccatcatg aaccaacggg tgtgcattct 420
 actgctgctg ttggcctggg ctggagggtt cttgcatgct gtagttcaac ttctttttgt 480
 ttacaacctt cccttctgtg gccccaatgt cattgaccat ttcattctgtg acatgtacc 540
 tttattaaaa cttgcctgca ctgacaccta tgttactggc ctactgtgg ttgccaatga 600
 tggggcaatc tgtgtgtgca tctttatgct cttactcttc tcctatgggg tcattctgca 660
 ctccctgaag aatcttagtc aggaagggag gcacaaagcc ttatccacct gtggctccca 720
 tatcactgtg gtgactctct tctttgtccc ttgtatttcc atgtatgtga gacctcctt 780
 gaccttacc attgataaat ccttgactgt gttttacact gttatcacac ctatgttgaa 840
 ccctctaata tatactttaa gaaatgcaga gatgaaaaat gctatgaaga agctctggac 900
 tagaaaaaga aaatgaggtg gcagacaaat gtatcatcta ttttcagtga agagttgctc 960
 cctccaggaa agccatttgt 980

<210> 659
 <211> 917
 <212> DNA
 <213> Unknown (H38g508 nucleotide)

<220>
 <223> Synthetic construct

<400> 659
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 tgggaacttc aaattttctt ctttgtgaca ttttcctga tctacggtgc tactgtggtg 120
 ggaaacattc tcattatggt cacagtgaca tgtagtctga cccttcattc tcccttgta 180
 tttctccttg gaaatctctc ttttttgga atgtgtctct ccactgccac aacacccaag 240
 atgatcaca gaccatctct gtgtggggct gcgtgacca gaagtcttc atgcattct 300
 ttgggagtgc tgagatgact cttctgataa tcatggcctt tgacaggtat gtagccat 360
 gtaaacccct gcactatagg acaatcatga gccacaagct gctaaagggg tttgcgata 420
 tttcatggat aattggtttt ttacactcca taagccagat agttttaaca atgaacttgc 480
 ctttctgtgg ccacaatgtc ataaacaaca tattttgtga tcttcccctt gtgatcaagc 540
 ttgcttgcat tgaaacatac accctggaat tatttgtcat tgctgacagc gggctgctct 600
 ctttcacctg tttcactctc ttgcttgttt cttacattgt catcctggtc agtgtacca 660
 aaaaatcatc acatgggctc tccaaggcgc tgtccacatt gtctgcccac atcattgtgg 720
 tcactctgtt ctttggacct tgtattttta tctatgtttg gccattcagt agtttggcaa 780
 gcaataaaaac tcttgcgtga ttttatacag ttatcacacc gttactgaat ccgagtattt 840
 ataccctgag aaataagaaa atgcaagagg ccataagaaa attacggttc caatatgtta 900
 gttctgcaca gaatttc 917

<210> 660
 <211> 1008
 <212> DNA
 <213> Unknown (H38g509 nucleotide)

<220>
 <223> Synthetic construct

<400> 660

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tggggaaacct	gtcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acatcttctt	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acggccccca	240
agatgactgt	ggacatccag	tctcacagca	gagtcattct	ctatgcaggc	tgccctgactc	300
agatgtctct	ctttgccatt	tttgaggca	tggaagagag	acatgttctt	gagtgtgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctataatc	attcagccat	catgaacccg	420
tgtttctgtg	gctttctagt	tttggtgtct	ttttttttt	ctctcagtct	tttagacgtc	480
cagctgcgca	acttgattgc	cttacaatg	acctgcttca	aggatgtgga	aattcctaata	540
ttcttctgtg	acctttctca	actcccccat	cttgcatgtt	gtgacacctt	caccaataac	600
ataatcctgt	atttccctgc	tgccatattt	ggttttcttc	ccatcttggg	gaccttttc	660
tcttactata	aaatcggttt	ctccattctg	agggtttcat	catctgggtg	gaagtataag	720
gccttctcca	cctgtgtgtc	tcacctgtca	gtggtttgc	gattttatgg	aacaggcggt	780
ggaggggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	aggctgcagt	ggcctcagt	840
atgtacacgg	tggtcacccc	catgctgaac	cccttcatct	acagcctgag	aaacagggat	900
attaaaagt	tcctgcggcg	gccgcacagc	agcacggtct	aatcttgata	tcttcttctc	960
tgttccattc	cttttgtagt	gtgggttaaa	aaaggcagca	aggtcaaa		1008

<210> 661

<211> 957

<212> DNA

<213> Unknown (H38g510 nucleotide)

<220>

<223> Synthetic construct

<400> 661

atgatggaaa	tagccaatgt	gagttctcca	gaagtctttg	tcctcctggg	cttctccaca	60
cgaccctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcacatcat	tctgggtctcc	catacagatg	tgacacctcca	cacacctatg	180
tactttcttc	ttgccaacct	cccccttctg	gacatgagct	tcaccacgag	cattgtccca	240
cagctcctgg	ctaacctctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtggtc	300
cagttctata	tctccattg	gctgggggca	accgagtgtg	tcctgctggc	caccatgtcc	360
tatgaccgct	acgctgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcacccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggc	tgaccaccag	catgggtgggc	480
tccacgctca	ccatgctcct	accgctgtgt	gggaacaatt	gcacgcacca	cttcttttgc	540
gagatgcccc	tcattatgca	actggcttgt	gtggatacca	gcctcaatga	gatggagatg	600
tacctggcca	gctttgtctt	tggtgtcctg	cctctggggc	tcacctctgt	ctcttacggc	660
cacattgccc	gggcccgtgt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tggtgtgtct	ctgttttacg	ggagcatcat	cttcatgtat	780
ctccagccag	ccaagagcac	ctcccatgag	cagggcaagt	tcatagctct	gttctacacc	840
gtagtcactc	ctgcgctgaa	cccacttatt	tacaccctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatggtatt	agagaactgc	tggtggctctg	caggcaagct	ggcgcaa	957

<210> 662

<211> 912

<212> DNA

<213> Unknown (H38g511 nucleotide)

<220>

<223> Synthetic construct

<400> 662

atggaaagag	caaaccattc	agtgggtatcg	gaattttattt	tggtgggact	ttccaaatct	60
caaaatcttc	agattttatt	cttcttgagg	ttctctgtgg	tcttcgtggg	gattgtgtta	120
ggaaacctgc	tcactttggg	gactgtgacc	tttgattcgc	tccttcacac	accaatgtat	180
tttctgttta	gcaacctctc	ctgcattgat	atgatcctgg	cttcttttgc	tacccttaag	240
atgattgtag	atttccctccg	agaacgtaag	accatctcat	gggtggggatg	ttattcccag	300
atgttcttta	tgacacctct	gggtgggagt	gagatgatgt	tgcttgtagc	catggcaata	360
gacaggatg	ttgccatatg	caaacccttc	cattacatga	ccatcatgag	cccacgggtg	420
ctcactgggc	tactgttata	ctcctatgca	gttggtttg	tgactcatc	tagtcaaagt	480

gctttcatgt	tgactttgcc	cttctgtggt	cccaatgtta	tagacagctt	tttctgtgac	540
cttccccctg	tgattaaact	tgccctgcaag	gacacctaca	tcctacagct	cctgggcatt	600
gctgacagtg	ggctcctgtc	actggctctgc	ttcctcctct	tgcttgtctc	ctatggagtc	660
ataatattct	cagttaggta	ccgtgctgct	agtcgatcct	ctaaggcttt	ctccactctc	720
tcagctcaca	tcacagttgt	gactctgttc	tttgctccgt	gtgtctttat	ctacgtctgg	780
cccttcagca	gatactcggt	agataaaaatt	ctttctgtgt	tttacacaat	tttcacacct	840
ctcttaaatc	ctattattta	tacattaaga	aatcaagagg	taaaagcagc	cattaataaaa	900
agactctgca	ta					912

<210> 663

<211> 963

<212> DNA

<213> Unknown (H38g512 nucleotide)

<220>

<223> Synthetic construct

<400> 663

atgggtcaatt	tgacttcaat	gagtggattc	cttcttatgg	ggttttctga	tgagcgttaag	60
cttcagattt	tacatgcatt	ggatatttctg	gtgacatacc	tgctggcctt	gacaggcaac	120
ctcctcatta	tcaccatcat	taccgtggac	cgctgtctcc	attcccccat	gtattacttt	180
ttaaagcacc	tctctcttct	ggacctctgc	ttcatctctg	tcacagtccc	ccagtccatt	240
gcaaattcac	ttatgggcaa	cggttacatt	tctcttggtc	agtgcattct	tcaggttttc	300
ttcttcatag	ctctggcctc	atcagaagtg	gccattctca	cagtgatgtc	ttatgacagg	360
tacgcagcaa	tctgtcaacc	acttcattat	gagactatta	tggatccccg	tgctgtagg	420
catgcagtga	tagctgtgtg	gattgctggg	ggcctctctg	ggctcatgca	tgctgccatt	480
aacttctcca	tacctctctg	tgggaagaga	gtcattcacc	aattcttctg	tgatgttctt	540
cagatgctga	aactagcctg	ttcttatgaa	ttcattaatg	agattgcact	ggctgcattc	600
acaacgtctg	cagcatttat	ctgtttgatc	tccattgtgc	tctcctacat	tcgcatcttc	660
tctacagtgc	tgagaatccc	atcagctgag	ggccggacca	aggtcttctc	cacctgccta	720
ccacacctat	ttgtagccac	cttctttctt	tcagctgcag	gctttgagtt	tctcagactg	780
cttctgatt	cctcatcgac	tgtggacctt	gtattctcgg	tattctatac	tgtgatacct	840
ccaacactca	atccagtcac	ttatagctta	cggaatgatt	ccatgaaggc	agcactgagg	900
aagatgctgt	caaaggaaga	gcttcctcag	agaaaaatgt	gcttaaaaagc	catgtttaaa	960
ctc						963

<210> 664

<211> 930

<212> DNA

<213> Unknown (H38g513 nucleotide)

<220>

<223> Synthetic construct

<400> 664

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cgacatcttc	aaaatttttt	ctttatatatt	ttctttgggg	tctatgtggc	cattatgctg	120
ggtaaccttc	tcattttggg	cactgttaatt	tctgatccct	gcctgcactc	ctccccatg	180
tacttctctg	tggggaacct	agctttcctg	gacatgtggc	tggcctcatt	tgccactccc	240
aagatgatca	gggatttccct	tagtgatcaa	aaactcatct	cctttggagg	atgtatggct	300
caaactcttct	tcttgcactt	tactgggtggg	gctgagatgg	tgctcctggt	ttccatggcc	360
tatgacagat	atgtggccat	atgcaaacc	ttgcattaca	tgactttgat	gagttggcag	420
acttgcatca	ggctggtgct	ggcttcatgg	gtcgttggat	ttgtgcactc	catcagtcaa	480
gtggctttca	ctgtaaattt	gccttactgt	ggccccaatg	aggtagacag	cttcttctgt	540
gacctccctc	tggtgatcaa	acttgccctg	atggacacct	atgtcttggg	tataattatg	600
atctcagaca	gtgggttgct	ttccttgagc	tgttttctgc	tctcctgat	ctcctacacc	660
gtgatectcc	tcgtatcag	acagcgtgct	gccggtagca	catccaaagc	actctccact	720
tgctctgcac	atatcatggt	agtgaacctg	ttctttggcc	cttgcatttt	tgtttatgtg	780
cggcctttca	gtaggttctc	tgtggacaag	ctgctgtctg	tgttttatac	cattttttact	840
ccactcctga	accacattat	ctacacattg	agaaatgagg	agatgaaagc	agctatgaag	900
aaactgcaaa	accgacgggt	gactttttcaa				930

<210> 665
 <211> 957
 <212> DNA
 <213> Unknown (H38g514 nucleotide)

<220>
 <223> Synthetic construct

<400> 665
 atggaagaa agaatcaaac agctataact gaattcatca tcttgggatt ctccaaccta 60
 aatgaattgc agtttttact attcaccatc ttcttttctga cttatttctg tactttggga 120
 ggaaatatat taattatctt gacgactgtg actgatccac acctgcatac acctatgtat 180
 tattttctag ggaacttggc ctttattgac atctgctaca ccaccagcaa tgtccccag 240
 atgatggtgc acctcctctc aaagaaaaaa agcatttctt atgtggggtg tgtggttcaa 300
 ctttttgcac ttgttttctt tgtaggatca gagtgtctcc tactggcagc aatggcatat 360
 gatcggttaca ttgcaatctg caatccttta aggtattcag ttattctgag caaggttcta 420
 tgcaatcaat tagcagcctc atgctgggct gctgggttcc ttaactcagt ggtgcataca 480
 gtgttgacat tctgcctgcc cttctgtggc aacaatcaga ttaattactt cttctgtgac 540
 atccccctt tgetgatctt gtcttgtgga aacacttctg tcaatgagtt ggactgcta 600
 tccactgggg tcttcattgg ttggactcct ttcttttcta tctgactttc ctacatttgc 660
 ataatctcca ccattcttgag gatccagtc ttagagggaa gacgaaaagc cttttctaca 720
 tgtgcctccc acctggccat tgtctttctc ttttatggca gcgccatctt tacatatgta 780
 cgccccatct caacttactc attaaagaaa gatagggttg tttcagtgtt gtacagtgtt 840
 gttacccccca tgctaaacct tataatttac acattgagga ataaggacat caaagaagct 900
 gtcaaaaacta tagggagcaa gtggcagcca ccaatttctt ctttggatag taaactc 957

<210> 666
 <211> 910
 <212> DNA
 <213> Unknown (H38g515 nucleotide)

<220>
 <223> Synthetic construct

<400> 666
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 gtactatttc ttttcttcta tatgtccatt tgggttggca atgtcctcat catggtcaca 120
 gtacgactct ataaatacct gaattcatca cccatgtatt tccttcttgg caacctctca 180
 tttctggacc tatgttattc aacagtaacg acccctaagc ttctggctga cttctttaat 240
 catgaaaaac tcatttccta tgaccaatgc attgtgcaac tcttcttctt gcattttgta 300
 ggggcagctg agatgttctt gctcacagtg atggcgtagc atcgctatgt tgcaatctgt 360
 cgcccgtctg actacaccac tgtcatgagt cgggggttat gctgtgtgtt ggttgctgcc 420
 tcctggatgg gaggatttgt gcaactccact gtccagacca ttctcactgt ccactacccc 480
 ttttgtgggc caaatcaggc ggaaaacttt ttttgtgat gttccccctg tcatcaaaact 540
 tgcttgtgct gacacttttg tcattgaatt gctcatgcta tctaacagtg ggttgatctc 600
 caccatctcc tttgtgtgct tgatttcctc ctacaccact atcctagtca agattcgctc 660
 caaggaagga aggcgaaagg cactctccac gtgtgctctc caccctatgg tggtaacact 720
 gtttttttga ccctgtattt tcactctacg tctgcttttc tctacatttt ctgtggacaa 780
 gatggtgtct gtactctaca atgttattac cccaatgcta aacccccctc tctacacact 840
 tcggaacaaa gaggtaaagt cagccatgca gaagctctgg gtcagaaatg ggcttacttg 900
 gaaaaagcag 910

<210> 667
 <211> 945
 <212> DNA
 <213> Unknown (H38g516 nucleotide)

<220>
 <223> Synthetic construct

<400> 667
 atggagaatg tcactacaat gaatgagttt cttctacttg gcctgactgg tgttcaggag 60
 ctgcagcctt tcttcttttg gattttctta atcatttacc tgataaactt gattggaaat 120
 ggatctatat tggatgatgg tgttttggaa ccacaactcc actcccctat gtattttttt 180
 ctgggaaacc tttcttgtct ggatatttct tattcttcag tgacactgcc caagctgctc 240
 gtaaaccctg tgtgcagtcg cagggtcata tcttttctag gctgtatcac ccagctacac 300
 ttcttccact ttttgggaag cacagaggcc attttactgg ctatcatggc ctttgaccgt 360
 tttgttgcca tctgcaatcc tcttcgctac actgtcatca tgaaccccca ggtgtgtatt 420
 ctgttggcag ctgcggcctg gctcatcagc ttcttttacg ctctgatgca ttctgtcatg 480
 actgcacacc tgagtttttg tggctctcag aaactcaatc acttcttcta cgatgtcaag 540
 ccgctcttag aattggcctg tagtgacaca ttactcaatc aatggcttct ttccattgtc 600
 acaggcagca tatccatggg agctttcttt ctgactcttc tctcctgctt ctatgtaatt 660
 ggcttccctt tgtttaagaa caggctctgc agaatactcc acaaggctct gtccacttgt 720
 gcctcccatc ttatgggtgg atgtcttttc tatggacctg tgggcttcac atatattcgt 780
 cctgtctcag ccacctccat gattcaggac cggataatgg ccatcatgta tagcgccgtc 840
 acccctgtac tgaatccact aatctacacc cttaggaaca aagaagtgat gatggctctg 900
 aagaaaatct ttggtaggaa gttgtttaaa gactggcagc aacac 945

<210> 668

<211> 966

<212> DNA

<213> Unknown (H38g517 nucleotide)

<220>

<223> Synthetic construct

<400> 668
 atgaatgaga caaatcattc tcgggtgaca gaatttgtgt tgctgggact gtctagtcca 60
 agggagctcc aacctttctt gtttcttaca ttttactac tttatctagc aattctgttg 120
 ggcaactttc tcatcatcct cactgtgacc tcagattccc gccttcacac ccccatgtac 180
 tttctgcttg caaacctgtc atttatagac gtatgtgttg cctcttttgc taccctaaa 240
 atgattgcag actttctggt tgagcgcaag actatttctt ttgatgcctg cctggcccag 300
 attttctttg tcatctctct cactggcagt gaaatgggtg tcttagtttc catggcctat 360
 gaccgttatg ttgctatatg caaacctctc cactacatga cagtcatgag ccgtcgtgta 420
 tgtgtgtgac tcgtcctcat ttcattggtt gtgggcttca tccatactac cagccagtgt 480
 gcattcactg ttaatctgcc attttgtggt cctaataagg tagacagttt tttctgtgac 540
 cttctcttag tgaccaagtt agcctgcata gaccttatg ttgtcagctt actaatagtt 600
 gcagatagtg gctttctttc tctgagttcc tttctcctct tgggtgtctc ctacactgta 660
 atacttgta cagttaggaa tcgctcctct gcaagcatgg cgaaggcccg ctccacattg 720
 actgtcaca tcaactgtgt cactttatc tttggaccat gcattttcat ctatgtgtgg 780
 cccttcagca gttactcagt tgacaaaagtc cttgctgtat tctacaccat cttcacgctt 840
 attttaaacc ctgtaatcta cacgctaaga aacaaagaag tgaaggcagc tatgtcaaaa 900
 ctgaagagtc ggtatctgaa gcctagtcag gtttctgtag tcataagaaa tgttcttttc 966
 ctagaa

<210> 669

<211> 594

<212> DNA

<213> Unknown (H38g518 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(594)

<223> n = A,T,C or G

<400> 669
 gnnccgctac tactacccat gtactgtttc ctgncatata tgtccgccac tgacctcggc 60
 ctgtccatat ccactctggt caccatgctg agtatattct ggttcaatgt gagggaaatc 120
 agcttaagtg cctgcttctc ccacatgttc tttattaaat tcttactgt catggaatcc 180

tcagtgtgt	tggccatggc	ttttgatcgt	tttgtggccg	tctctaatacc	ccttaggtat	240
gccatgattt	taactgactc	cagaatagct	caaattggag	tggcaagtgt	catcaggggg	300
ctcctaatagc	tgacaccaat	ggtagcactt	cttataagac	tttcctactg	ccacagcccg	360
agtactccac	cactcctact	gctaccaccc	tgatgtgatg	aagttctcat	gcacagacgc	420
cagaatcaac	agtgcagttg	ggctgactgc	catgttctct	actggttggt	gtagacttac	480
ttctcatcct	cctttcttat	gttttgatca	ttaggactgt	ccttancgtt	gcttccccag	540
aagagaggaa	ggaaaccctt	cagtacatgt	gtctcccaca	ttgggggctt	ttgc	594

<210> 670

<211> 939

<212> DNA

<213> Unknown (H38g519 nucleotide)

<220>

<223> Synthetic construct

<400> 670

atgagccctg	agaaccagag	cagcgtgtcc	gagttccctc	ttctgggcct	ccccatccgg	60
ccagagcagc	aggctgtgtt	cttcaccctg	ttcctgggca	tgtacctgac	cacggtgctg	120
gggaacctgc	tcacatgct	gctcatccag	ctggactctc	accttcacac	ccccatgtac	180
ttcttctca	gccacttggc	tctcactgac	atctcctttt	catctgtcac	tgccccaaag	240
atgctgatgg	acatgcggac	taagtacaaa	tcgatcctct	atgaggaatg	catttctcag	300
atgtattttt	ttatatattt	tactgacctg	gacagcttcc	ttattacatc	aatggcatat	360
gaccgatatg	ttgccatatg	tcaccctctc	cactacactg	tcacatgag	ggaagagctc	420
tgtgtcttct	tagtggtgtg	atcttggatt	ctgtcttggtg	ccagctccct	ctctcacacc	480
cttctcctga	cccggctgtc	tttctgtgct	gcgaacacca	tcccccatgt	cttctgtgac	540
cctgtgcgcc	tgctcaagct	gtcctgctca	gatattcttc	tcaatgagct	ggtcatgttc	600
acagtagggg	tggtggtcat	taccctgcca	ttcatgtgta	tcctgggtatc	atatggctac	660
attggggcca	ccatcctgag	ggctcccttca	accaaaggga	tccacaaagc	attgtccaca	720
tgtggctccc	atctctctgt	ggtgtctctc	tattatgggt	caatatttgg	ccagtacctt	780
ttcccgaactg	taagcagttc	tattgacaag	gatgtcattg	tggctctcat	gtacacgggtg	840
gtcacaccca	tgttgaaccc	ctttatctac	agccttagga	acagggacat	gaaagaggcc	900
cttgggaaac	tcttcagtag	agcaacattt	ttctcttgg			939

<210> 671

<211> 586

<212> DNA

<213> Unknown (H38g520 nucleotide)

<220>

<223> Synthetic construct

<400> 671

ckactactac	tacctatgta	tttttttctk	kgcaacctgt	cactgttaga	tctctgcctt	60
ccttcaatcc	ctgtgcccac	gatgtgcag	aattttattaa	ctcaaaggta	aaccatctct	120
atgtggtact	gcattgtcca	gagtttcttt	ctcatattct	ctgggagcac	agaagcctgc	180
ctactccttg	ccatggcctg	tgatcactct	acttccaact	gccaccctcg	gctcaacgat	240
gtggttatga	atcagcctgt	ctgtgtcagg	atgggtgattg	cagcatgggc	agtgggattc	300
ctaaactcct	tgacaaagaa	tcttttctatt	tacaacttac	acttctgtgg	ccccagtgtc	360
atccctcact	tctgtgtgta	gctgccttca	ctcttccctc	tctcttgat	tgatccagct	420
gccagtgagg	tccttctctg	tgggtcatgt	acattgctag	gatttgtgac	ttgccgctgg	480
tcctcttttc	ttactctaac	accatctctg	cctcctagcc	atttgktttt	ctgagggtca	540
aggcaaagcc	ttctccacct	gctcctccca	cctcaccgtg	gtgctt		586

<210> 672

<211> 918

<212> DNA

<213> Unknown (H38g521 nucleotide)

<220>

<223> Synthetic construct

ttcctccgaa	agctctcatt	tctggacatg	tgtttcacca	cctgcattgt	ccttcagatg	240
ctgggtgaaca	tctggggaga	gagtaagaag	gtcagctatg	taggctgcat	ggttcagtat	300
tctgtagcct	tggtctcttg	ctccacagag	tgtgtgcttc	ttgctatcat	ggctgtggac	360
cgttatgttg	ccgtccgctg	gccccctcac	tatgttacaa	tcatgcacca	acagatctgc	420
cactttctcg	cagccttgtc	ctggttttct	gggttagcca	actctctctt	tcactcttca	480
ctaaccacca	ttttgcctct	gtgtggccac	cgccgtgtgg	accatttctt	tgtgaggtcc	540
tgctcattgt	caagctgtcc	tgcgtggaca	ccggcccaac	tgaattgaag	atgttaattg	600
ctcgtgtgat	catccttgcc	cttcagtggt	gcaccatcct	cacctcctat	gcctgcattg	660
ccagggctgt	gctgaggctg	cagtctgctg	aaggtcagca	gaaggccttt	gggacttgtg	720
cctccacact	gatggtgggt	ttgctgttct	atggaacctat	catgttcatg	tgtcttcagc	780
tgaagagtaa	ctactctcag	attcagggaa	agctgcttcc	tcttgtttat	accattgctg	840
ccccaccta	gaaccaccta	atctatgcac	tgaggaacaa	agttgtaaag	agggcaattg	900
gaaaattgat	ctggaaggat	tca				923

<210> 452

<211> 951

<212> DNA

<213> Unknown (H38g301 nucleotide)

<220>

<223> Synthetic construct

<400> 452

atggaaatag	ataaccagac	gtgggtgaga	gaattttattc	tccttggett	atccagtgc	60
tggtgcactc	agatatccct	gttttccctg	ttcttggtca	catacctcat	gacagtgcctg	120
gggaactgtc	tcattgtcct	tctgatcaga	ctggacagcc	gactccacac	tcccatgtat	180
ttctttctca	ccaacctctc	ccttgctgat	gtctcctatg	ccacaagcgt	agtccccag	240
ctgctggcac	attttcttgc	agaacataaa	gccatcccat	tccagagctg	tgagcccag	300
ttatttttct	ccctggcctt	gggtgggatt	gagtttggtc	tcctggcagt	gatggcctat	360
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tgtgctagggt	tggccatcac	atcctgggtc	agtggctcca	tcaactctct	tgtgcagact	480
gctatcacct	ttcagctgcc	catgtgcact	aacaagttta	ttgatcacat	atcctgtgaa	540
ctcctagctg	tggtcagggt	ggcttgtgtg	gacacctcct	ccaatgaggc	tgccatcatg	600
gtgtctagca	ttgttcttct	gatgacacct	ttctgctgg	ttctgttgtc	ctacatccgg	660
atcatctcca	ccatcctaaa	gatccagtcc	agagaaggaa	gaaagaaagc	cttccacacg	720
tgtgcctctc	acctcacggg	ggttgccttg	tgtacggca	caacgatttt	cacttacatc	780
cagccccact	ctggtccctc	agtccttcaa	gagaagctga	tctctgtctt	ctatgccatt	840
gttatgcctc	tgctgaacct	tgtgatttat	agtctaagga	ataaagaggt	gaagggggcc	900
tggcataaac	tattagagaa	attctctggg	ttaacatcca	agctgggaac	t	951

<210> 453

<211> 918

<212> DNA

<213> Unknown (H38g302 nucleotide)

<220>

<223> Synthetic construct

<400> 453

atggaagggga	aaaatcaaac	caatatctct	gaatttctcc	tcctgggctt	ctcaagttgg	60
caacaacagc	agggtgctact	ctttgcactt	ttctgtgtgc	tctatttaac	agggctgttt	120
ggaaacttac	tcactcttgc	ggccattggc	tcggatcact	gccttcacac	acccatgtat	180
ttcttccctg	ccaatctgtc	cttggtagac	ctctgccttc	cctcagccac	agtccccag	240
atgctactga	acatccaaac	ccaaacccaa	accatctcct	atcccggctg	cctggctcag	300
atgtatttct	gtatgatgtt	tgccaatatg	gacaattttc	ttctcacagt	gatggcatat	360
gaccgttacg	tggccatctg	tcacctttta	cattactcca	ccattatggc	cctgcgcctc	420
tgtgcctctc	tggtagctgc	accttgggtc	attgccattt	tgaacctctt	cttgcacact	480
cttatgatgg	cccacttgca	cttctgctct	gataatgtta	tccaccattt	cttctgtgat	540
atcaactctc	tcctccctct	gtcctgttcc	gacaccagtc	ttaatcagtt	gagtgttctg	600
gctacgggtg	ggctgatctt	tgtggtacct	tcagtgtgta	tcctgggtatc	ctatatactc	660
attgttttctg	ctgtgatgaa	agtccttctt	gcccgaaggaa	aactcaaggc	tttctctacc	720

tgtggatctc	accttgcctt	ggtcattctt	ttctatggag	caaacacagg	ggctctatatg	780
agcccccattat	ccaatcactc	tactgaaaaa	gactcagccg	catcagtcac	ttttatgggt	840
gtagcacctg	tggtgaatcc	attcattttac	agttaaagaa	acaatgaact	gaaggggact	900
ttaaaaaaga	ccctaagc					918

<210> 454

<211> 933

<212> DNA

<213> Unknown (H38g303 nucleotide)

<220>

<223> Synthetic construct

<400> 454

atgggaccca	gaaaccaaac	agctgtttca	gaatttcttc	tcatgaaagt	gacagaggac	60
ccagaactga	agttaatccc	tttcagcctg	ttcctgtcca	tgtacctggg	caccatcctg	120
gggaacctgc	tcattctcct	ggctgtcatc	tctgactccc	acctccacac	ccccatgtac	180
ttccttctct	ttaatctctc	ctttactgac	atctgtttaa	ccacaaccac	agtcccaaag	240
atcctagtga	acatccaagc	tcagaatcag	agtatcactt	acacaggctg	cctcaccag	300
atctgtcttg	tcttggtttt	tgctggcttg	gaaagtgtgt	ttcttgagc	catggcctac	360
gaccgctatg	tggtccatttg	ccaccactg	aggtacacag	tcctcatgaa	tgtccatttc	420
tggggcttgc	tgattcttct	ctccatgttc	atgagcacta	tggatgccct	ggttcagagt	480
ctgatgggtat	tcagctgtgc	cttctgcaaa	aacgttgaaa	tcctttgtgt	cttctgtgaa	540
gtcgttcagg	tcatacaagc	cgctgtttct	gacaccctca	tcaacaacat	cctcatatat	600
tttgcaagta	gtgtatttgg	tgcaattcct	ctctctggaa	taattttctc	ttattctcaa	660
atagtcacct	ctgttctgag	aatgccatca	gcaagaggaa	agtataaagc	gttttccacc	720
tgtggctgtc	acctctctgt	tttttccttg	ttctatggga	cagcttttgg	gggtgtacatt	780
agttctgtctg	ttgctgagtc	ttcccgaatt	actgctgtgg	cttcagtgat	gtacactgtg	840
gtccctcaaa	tgatgaaccc	cttcatctac	agcctgagaa	ataaggagat	gaagaaagct	900
ttgaggaaac	ttattggtag	gctgtttcct	ttt			933

<210> 455

<211> 939

<212> DNA

<213> Unknown (H38g304 nucleotide)

<220>

<223> Synthetic construct

<400> 455

atggaagcga	gaaaccaaac	agctattttca	aaattccttc	tcctgggact	gatagaggat	60
ccggaactgc	agcccgctct	tttcagcctg	ttcctgtcca	tgtacttggg	caccatcctg	120
gggaacctgc	tcattctcct	ggctgtcatc	tctgactctc	acctccacac	ccccatgtac	180
ttcttctctc	ccaatctctc	ctttttggac	atttgtttaa	gcacaaccac	gatcccaaag	240
atgctgggtga	acatccaagc	tcagaatcgg	agcatcacgt	actcaggctg	cctcaccag	300
atctgctttg	tcttggtttt	tgctggcttg	gaaaattgtc	tccttgagc	aatggcctat	360
gaccgctatg	tggtccatttg	tcaccccttc	agatacacag	tcattcatgaa	ccccgcctc	420
tgtggcctgc	tgattcttct	ctctctgttg	actagtgttg	tgaatgccct	tcttctcagc	480
ctgatgggtg	tgaggctgtc	cttctgcaca	gacctggaaa	tcctgtctct	cttctgtgaa	540
ctggctcagg	tcattccaact	cacctgttca	gacaccctca	tcaataacat	cctgatatat	600
tttgagctt	gcatttttgg	tggtgttctc	ctgtctggaa	tcattttgtc	ttacactcag	660
atcacctcct	gtgttttggag	aatgccatca	gcaagtggaa	agcacaagc	agtttccacc	720
tgtgggtctc	acctctccat	tggtctcttg	ttctatgggg	cagggttggg	gggtgtacatt	780
agttctgttg	ttactgactc	acctaggaag	gctgcagtgg	cttcagtgat	gtattctgtg	840
ttccctcaaa	tggtgaaccc	ctttatctat	agtctgagga	ataaggacat	gaaaggaacc	900
ttgagggaagt	tcataaggag	gataccttct	cttctgtgg			939

<210> 456

<211> 939

<212> DNA

<213> Unknown (H38g305 nucleotide)

<220>

<223> Synthetic construct

<400> 456

atggaaccaa	gaaaccaa	cagtgc	catctc	caattcat	cc	tctggg	actc	cagaaa	ag	60
ccagagcagg	agacgctt	cttttc	cctg	ttcttctg	ca	tgtacctg	gt	catggtc	gtg	120
gggaacctgc	tcatactct	ggccatc	agc	atagactcc	ac	ctccacac	cccc	atgtac		180
ttcttcctgg	ccaacctgtc	cctgggtg	at	ttctgtctg	gg	ccaccaacac	catcc	ctaag		240
atgctgggtga	gccttcaaac	cgggagca	ag	gccatctct	at	ccctgctg	cctgat	ccag		300
atgtacttct	tccatttctt	tggcatcgt	g	acagcgtca	ta	atcgccat	gatgg	cttat		360
gaccggttcg	tggccatctg	ccaccattg	c	actacgcca	ag	atcatgag	cctacg	cctc		420
tgtcgccctg	tggctggcgc	cctctggg	cg	tttctctg	ct	catctcact	ca	ctcacatc		480
ctcctgatgg	cccgctctgt	tttctgcgg	c	agccatgag	tg	ccctcacta	cttctg	cgcac		540
ctcactccca	tctctcgact	ttcgtgcac	g	gacacctctg	tg	aataggat	cttcat	cctc		600
attgtggcag	ggatgggtg	agccacgccc	t	ttgtctgca	tc	ctggcctc	ctatg	ctcgc		660
atccttgtgg	ccatcatgaa	ggtccctct	g	caggcggca	gga	agaaagc	cttctcc	cacc		720
tgcagctccc	acctgtctgt	ggttgcctc	t	ctatggga	cc	accattgg	cgtctat	ctg		780
tgtccctcct	cggctctcac	cactgtgaag	g	agaaagctt	ct	gcggtgat	gtacac	agca		840
gtcaccccca	tgttgaatcc	cttcatctac	ag	cttgagga	ac	agagacct	gaaagg	gggct		900
ctcaggaagc	tgggtcaacag	aaagatcacc	tc	atcttcc						939

<210> 457

<211> 295

<212> DNA

<213> Unknown (H38g306 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(295)

<223> n = A,T,C or G

<400> 457

atgtcagcct	ccagtatcac	ctcaacacat	ccaacttct	tcttgttgat	ggggattcca		60
ggcctggagc	acctgcacat	ctggatctcc	atcccttct	cagcatatac	actggccctg		120
cttggaaact	gcactctcct	tctcatcatc	caggctgatg	cagccctcca	tgaacccatg		180
tacctcttct	tggccatggt	ggcagccatc	gaccagctct	ctatctcctc	agcactgccc		240
ccgggacaga	cgggtgattct	ggttcacgga	tcngaagaat	aaaccctttg	ccggg		295

<210> 458

<211> 960

<212> DNA

<213> Unknown (H38g307 nucleotide)

<220>

<223> Synthetic construct

<400> 458

atgccatctg	cctctgccat	gatcattttc	aaacctgagca	gttacaatcc	aggacccttc		60
attctggtag	ggatcccagg	cctggagcaa	ttccatgtgt	ggattgggaat	tccttctgt		120
atcatctaca	ttgtagctgt	tgtgggaaac	tgcactctc	tctacctcat	tgtggtaggag		180
catagtcttc	atgaacccat	gttcttcttt	ctctccatgc	tggccatgac	tgacctcatc		240
ttgtccacag	ctgggtgtg	ctaaagcactc	agtatctttt	ggctaggggc	tcgcgaaatc		300
acattcccag	gatgccttac	acaaatgttc	ttccttccact	ataactttgt	cctggattca		360
gccattctga	tggccatggc	atttgatcac	tatgtagcta	tctgttctcc	cttgagatat		420
accaccatct	tgactcccaa	gaccatcatc	aagagtgtcta	tgggcatctc	cttctgaagc		480
ttctgcatca	tcttgccaga	tgtattcttg	ctgacatgcc	tgcctttctg	caggacacgc		540
atcatacccc	acacatactg	tgagcatata	ggtgttgccc	agctcgccctg	tgtgatatac		600
tccatcaact	tctggtagtg	cttttgtgtt	cccatcatga	cggctcatctc	agatgtgatt		660

ctcattgctg	tttctacgc	acacatcctc	tgtgctgtct	ttggccttcc	ctcccaagag	720
gcctgccaga	aagccctcgg	cacttgtggt	tctcatgtct	gtgtcatcct	catgttttat	780
acacctgcct	ttttctccat	cctcgcccat	cgctttggac	acaatgtctc	tcgcaccttc	840
cacatcatgt	ttgccaatct	ctacattgtt	atcccacctg	cactcaaccc	catggtttac	900
ggagtgaaga	ccaagcagat	cagagataag	gttatacttt	tgttttctaa	gggtacagga	960

<210> 459

<211> 936

<212> DNA

<213> Unknown (H38g308 nucleotide)

<220>

<223> Synthetic construct

<400> 459

atgagcggga	caaaccagtc	gagtgtctcc	gagttcctcc	tcttgggact	ctccaggcag	60
ccccagcagc	agcatctcct	ctttgtgttc	ttcctcagca	tgtacctggc	cactgtcctg	120
gggaacctgc	tcacatcctt	gtccgtaagc	atagactcct	gcctgcacac	ccccatgtac	180
ttcttctctc	gcaacctgtc	ttttgtggac	atctgcttct	ccttcaccac	cgtecccaag	240
atgctggcca	atcacatact	cgagactcag	accatctcct	tctgtggctg	tctcacacag	300
atgtatttgc	ttttcatgtt	cgtggacatg	gacaatttcc	tcttagctgt	gatggcctat	360
gaccactttg	tcgccgtgtg	ccacccctta	cattacacag	caaagatgac	ccatcagctc	420
tgtgccctgc	tggttgctgg	attatgggtg	gttgccaacc	tgaatgtcct	tctgcacacc	480
ctgctgatgg	ctccactctc	attctgtgca	gacaatgcc	tcaactcactt	cttctgcgat	540
gtgactcccc	tactgaaact	ctcctgtctc	gacacacacc	tcaatgaggt	cataatcctt	600
agtgaggggt	ccctgggtcat	gatcacccca	tttctttgca	tcttggcttc	ttatatgcac	660
atcacctgca	ctgtcctgaa	ggtcccatcc	acaaagggaa	ggtggaaagc	cttctccacc	720
tgtgggttctc	acctgggtgt	ggttctctct	ttctacagca	ccatcattgc	tgtgtatttt	780
aacctctgt	cctcccactc	agctgagaaa	gacactatgg	ctactgtgtt	gtatacagta	840
gtgactccca	tgctaaaccc	tttcatctac	agcctgagga	acagggtactt	gaaaggggct	900
ctgaaaaaag	tagttggcag	ggtgggtgtt	tctgtc			936

<210> 460

<211> 762

<212> DNA

<213> Unknown (H38g309 nucleotide)

<220>

<223> Synthetic construct

<400> 460

atgtacttct	tcttgcgcca	actctcagtg	gtggagctct	tctacaccac	tgacatcgtg	60
cccaggaccc	tggccaatct	gggtcctccg	catccccagg	ccatctcttt	ccagggtctgt	120
gcagcccata	tgtacgtctt	cattgtcctg	ggcatctcgg	agtgtgcctt	gtcactgcc	180
atggcctatg	accgatatgt	tgccatctgc	cagccctac	gctattccac	cctcttgagc	240
ccacgggctt	gcâtggccat	ggtgggtacc	tcttggctca	caggcatcat	cacggccacc	300
acccatgcct	ccctcatctt	ctctctacct	tttcgcagcc	acccgatcat	cccgcacttt	360
ctctgtgaca	tcttgcaggt	actgaggctg	gcaagtgtctg	ggaagcacag	gagcgagatc	420
tccgtgatga	cagccaccat	agtcttcatt	atgatccctt	tctctctgat	tgtcacctct	480
tacatccgca	tcttgggtgc	catectagca	atggcctcca	cccagagccg	ccgcaaggtc	540
ttctccacct	gtctctccca	tctgtctcgt	gtctctctct	tctttggaac	agccagcatc	600
acctacatcc	ggcgcaggc	aggtcctctt	gttaccacag	accgcgtcct	cagtctcttc	660
tacacagtca	tcacacccat	gctcaacccc	atcatctaca	cccttcggaa	caaggacgtg	720
aggagggccc	tcgcgacctt	ggtgaagagg	cagcgccctt	ca		762

<210> 461

<211> 998

<212> DNA

<213> Unknown (H38g310 nucleotide)

<220>

<223> Synthetic construct

<400> 461

atggatggag	agaatcactc	agtggatatct	gagtttttgt	ttctgggact	cactcattca	60
tgggagatcc	agctcctcct	cctagtgttt	tctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcatgtgttt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	tcagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggtggtgtg	gagatgggtg	tgctcatagc	catggccttt	360
gacagttatg	tggccctatt	aagcccctcc	actatctgac	cattatgagc	ccaagaatgt	420
gcctttcatt	tctggctgtt	gcctggacc	ttgttgtcag	tcactccctg	ttccaactgg	480
catttcttgt	taatttacc	ttctgtggcc	ctaattgtgt	ggacagcttc	tactgtgacc	540
ttcctcagct	tctcagacta	gcctgtaccg	acacctacag	attgcagttc	atggtcactg	600
ttaacagtgg	gtttatctgt	gtgggtactt	tcttcatact	tctaactctc	tacgtcttca	660
tcctgtttac	tgtttggaaa	cattcctcag	gtgggttcac	caaggccctt	tccactcttt	720
cagctcacag	cacagcggtc	cttttgttct	ttgggtccacc	catgtttgtg	tatacatggc	780
cacaccctaa	ttcacagatg	gacaagtttc	tggctatttt	tgatgcagtt	ctcactcctt	840
ttctgaatcc	agttgtctat	acattcagga	ataaggagat	gaaggcagca	ataaagagag	900
tatgcaaaca	gctagtgtat	tacaagaaga	tctcataaat	gatacaataa	gcccttctcg	960
ttaaacatga	tatggcttta	tgtttctttc	tttgatat			998

<210> 462

<211> 933

<212> DNA

<213> Unknown (H38g311 nucleotide)

<220>

<223> Synthetic construct

<400> 462

atggaagagt	acaacacatc	ctctacagac	ttcactttca	tggggctgtt	caacagaaaag	60
gaaacctcag	gtcttatttt	tgccatcacc	tctatcatct	tcttcaccgc	actgatggcc	120
aatgggggta	tgatcttctc	gatccaaaca	gatttgcgcc	ttcatacacc	catgtacttc	180
ctcctcagcc	acctttcctt	aattgacatg	atgtatattt	ccactattgt	gcctaagatg	240
ctgggttaatt	acctgctgga	tcaaaggacc	atttcctttg	tgggggtgcac	agctcaaac	300
ttcctctacc	ttacccttgt	gggagctgaa	ttcttctctg	tgggcctcat	ggcctatgac	360
cgctatgtgg	ccatttgcaa	ccctctgaga	tacctgttcc	tcattgagccg	ccgggtctgt	420
tggatgatta	tagcaggttc	ctgggtttggg	ggctctttgg	atggcttctc	cctaaccctc	480
atcaccatga	gctttccctt	ctgcaattcc	cgggagatta	accacttctt	ctgcgaggca	540
ccagcagtc	tgaagtggc	atgtgcagac	acagccctct	acgagacagt	gatgtatgtg	600
tgtgtgtttt	tgatgtgtct	gattcctttc	tctgtagtcc	ttgcttctta	tgcccgaatc	660
ctgactacag	ttcagtgcat	gagctcagtg	gagggcagga	agaaggcatt	tgccacttgc	720
tcateccaca	tgactgtggg	gtccttgttc	tacgggtctg	ccatgtacac	ctacatgctg	780
ccacattctt	accacaagcc	agcccaggac	aaagtcctct	ctgtgtttta	caccattctc	840
acacccatgc	tgaacccctt	catctacagc	cttagaaaca	aggatgtgac	tggagctctg	900
aagagggcct	tggggaggtt	caagggtcct	caa			933

<210> 463

<211> 883

<212> DNA

<213> Unknown (H38g312 nucleotide)

<220>

<223> Synthetic construct

<400> 463

atccaatgca	agggttaata	gaagtgaatt	aagacattct	ctgtaactcc	aatattaaat	60
ggaaaccggg	aaatagccag	attcctctcc	aacctgtcct	tggctggcat	cggtttcccc	120
tccaccatag	tctccaagat	gattgtggac	atccagtctc	acagcagagt	catctcctat	180
gcggtgtgcc	tgactcaggt	atctcttttt	gccgtttttg	gatgcatgga	agacatgctt	240
ctgagtgtga	tggcttatga	cgggtttgtg	gacatcgggtc	accctctgga	ttatccagtc	300

atcatgaacc	catgtttctg	tggttctcta	gtttgtgtgt	cttttttct	cagtctttta	360
gactcccagc	tgcacaattg	gattgcctta	caaattacct	gcttcaagga	tgtggaaatt	420
cccaatttct	tctgtgaccc	ttctcaactc	ccccaccctt	gcctgttgtg	acaccttcac	480
caatgacata	gtcatgtatt	tccttgctgc	catatttggg	ttctttccca	tttcggggcc	540
ttttctctta	ctataaaatt	gtttcctcca	ttctgagggt	ttcatcatca	ggtgggaagt	600
ataaagcctt	ctccacctgt	ggctctcacc	tgtcagttgt	ttgcttattt	tatggaacag	660
gctttggagg	ggacctcagt	tcagacatgt	cctcttatcc	cagaaaaggt	gcagtggcct	720
cagtgatgta	cacggtgggt	actcccatgc	tgaacccatt	catttacagc	ctaacaggga	780
aattaaaagt	gccctgcggc	agctgcactg	cagaatagtc	taatctcatt	ttcttattat	840
ctgttccatt	ccttccgtag	tgtgagttag	aaaaggcagc	aag		883

<210> 464

<211> 942

<212> DNA

<213> Unknown (H38g313 nucleotide)

<220>

<223> Synthetic construct

<400> 464

atgaccctgg	gatccctggg	aaacagcagc	agcagcgttt	ctgctacctt	cctgctgagt	60
ggcatccctg	ggctggagcg	catgcacatc	tggatctcca	tcccactgtg	cttcatgtat	120
ctgggttcca	tcccgggcaa	ctgcacaatt	ctttttatca	ttaaaacaga	gcgctcactt	180
catgaacctt	tgtatctctt	cctgtccatg	ctggctctga	ttgacctggg	tctctccctt	240
tgcactctcc	ctacagtctt	gggcatcttt	tgggttggag	cacgagaaat	tagccatgat	300
gcctgctttg	ctcagctctt	tttcattcac	tgtctctcct	tctctgagtc	ctctgtgcta	360
ctgtctatgg	cctttgaccg	ctttgtggct	atctgccacc	ccttgcaacta	tgtttccatt	420
ctcaccaaca	cagtcattgg	caggattggc	ctggctctct	tgggtcgtag	tgtagcactc	480
atttttccat	taccttttat	gctcaaaaga	ttcccctatt	gtggctcccc	agttctctca	540
cattcttatt	gtctccacca	agaagtgatg	aaattggcct	gtgccgacat	gaaggccaac	600
agcatctacg	gcattgtttg	catcgtctct	acagtggtga	tagactcact	gctcatcctc	660
ttctcttatg	ctctgatcct	gcgcaccgtg	ctgtccatcg	cctccagggc	tgagagattc	720
aaggccctta	acacctgtgt	ttcccacatc	tgtgctgtgc	tgtctcttca	cactcccatg	780
attggcctct	ctgtcatcca	ttccttttga	aagcaggcac	cccacctggg	ccagggtggtc	840
atgggtttca	tgtatcttct	ctttcctcct	gtgatgaatc	ccattgtcta	cagtgtgaag	900
accaaacaga	tccgggatcg	agtgaacgat	gccttttgtt	ac		942

<210> 465

<211> 990

<212> DNA

<213> Unknown (H38g314 nucleotide)

<220>

<223> Synthetic construct

<400> 465

atgggactct	tcagacaatc	caaacatcca	atggccaata	tcacctggat	ggccaaccac	60
actggatggg	cggatttcat	cctgttggga	ctcttcagac	aatccaaaca	tccagcacta	120
ctttgtgtgg	tcatttttgt	ggttttcctg	atggcgttgt	ctggaaatgc	tgtcctgatc	180
cttctgatac	actgtgacgc	ccacctccac	acccccatgt	actttttcat	cagtcaattg	240
tctctcatgg	acatggcgta	cattttctgtc	actgtgccca	agatgetcct	ggaccaggtc	300
atgggtgtga	ataagatctc	agccccctgag	tgtgggatgc	agatgttctt	ctacgtgaca	360
ctagcagggt	cagaattttt	ccttctagcc	accatggcct	atgaccgcta	cgtggccatc	420
tgccatcctc	tccgttacc	tgtcctcatg	aaccataggg	tgtgtctctt	cctgtcatca	480
ggctgctggg	tcctgggctc	agtggatggc	ttcacattca	ctcccatcac	catgaccttc	540
cccttccgtg	gatcccggga	gattcatcat	ttcttctgtg	aagttcctgc	tgtattgaat	600
ctctcctgct	cagacacctc	actctatgag	attttcatgt	acttgtgctg	tgtcctcatg	660
ctcctcatcc	ctgtggtgat	catttcaagc	tcctatttac	tcatectcct	caccatccac	720
gggatgaact	cagcagaggg	ccggaaaaag	gccttttgcca	cctgtctctc	ccacctgact	780
gtggtcatcc	tcttctatgg	ggctgccatc	tacacctaca	tgtctcccag	ctcctaccac	840
acccttgaga	aggacatgat	ggtatctgtc	ttctatacca	tcctcactcc	agtgggtgaac	900

cctttaatct atagtcttag gaataaggat gtcattggggg ctctgaagaa aatgttaaca 960
 gtggaacctg cctttcaaaa agctatggag 990

<210> 466
 <211> 591
 <212> DNA
 <213> Unknown (H38g315 nucleotide)

<220>
 <223> Synthetic construct

<400> 466
 gctgccatgg ctttaagaccg gtacatagea atctgtaacc cgctgctcta tacagtgatt 60
 atgtccaaga aggtttgttg ccagcttgca attggagcat ttttgggggg cactatgagc 120
 tcaattattc ataccacgaa cactttccat ctgtcattct gctccagaga tattaacctat 180
 ttcttttgtg atatctcccc actcttctct ctgtcctgca ctgacacata catgcatgac 240
 atcattctgg tggctcttgc cagttttgtg gaagcaatct gtcttctatc agttctcctt 300
 tcttatgtct tcattatggc agctattctt agaacagggt ctgtggaggg aagaagaaga 360
 gggttctcca cttgtgcttc ccacctgact gtggctacta tgtatcatgg taccttgatc 420
 ttcatattat tgcgtcccag cactggccat tcaactggata ttgacaaagt gacctctgtg 480
 ttctatactt tgattatacc tatgttgaac cctctaattt acagtctaag gaacaaagat 540
 gtcaaaaatg ctttttagaaa agtgattggc cgaaaattac ttccttaagg t 591

<210> 467
 <211> 938
 <212> DNA
 <213> Unknown (H38g316 nucleotide)

<220>
 <223> Synthetic construct

<400> 467
 atgatgactc ttaagaactg cactgtgttt actgacttta tattcttagg actttcaggt 60
 acacaggata tacagcaggg gctctttgtg cttttcttcc tgatttatgg cataactgtg 120
 attgtcaatc tagggatgat cctactgatc aagatggatc tcagacttca cacaccctgt 180
 tattatttcc tgagcaattt gtctttctgt gatgtctgct actcttccac gtctctccca 240
 aatgctagct gatttcttat cggacaaaaa gtggattccg tataatttat gtgccattca 300
 gatgtattta tttggagtct ttgcagatgt ggaatgtctc atgttggctg tcatggccta 360
 tgatcgttat gttgccattt gcaatccact tctttatacg atcactatgc ccaggaggat 420
 ctgcacccag ctagtggctc ttgcctatgt tgtagggtttg gtggattctg caatccacac 480
 ctgtctgaca ttcagattgt cattctgcaa ttctaattgc atcaatcact ttttctgtga 540
 catcccaccc ttgtagccc tcaatcctac tattaattgc tattaatgag atagtgatgt 600
 tcacattcgt tggctgtgtt ggggggtgca gcattgtcac tgtcttctc tctacagct 660
 acatcataat taccatcctt aaaatgagct cagctgaggg cagacggaaa gccttctcta 720
 cctgcacctc ccacttgatg gccgtggctg tatttcatgg cacactcctg ttcattgtatt 780
 tccgacccag ttcaagttac tcaatggaaa cagacaaaat ggcctctgtt ttctacacag 840
 ttgtcatacc tatgttaaat ccactgatct acagcttaag gaatagggat gtgaaagggt 900
 ctctgaaaaa agcaataagc actaaattat attctgta 938

<210> 468
 <211> 969
 <212> DNA
 <213> Unknown (H38g317 nucleotide)

<220>
 <223> Synthetic construct

<400> 468
 atgtcaacat taccaactca gatagcccc aatagcagca cttcaatggc cccacacctc 60
 ttgctgggtg gcatgccagg cctatcaggt gcacctcct ggtggacatt gccctcatt 120
 gctgtctacc ttctctctgc actggggaat ggcaccatcc tctggatcat tgccctgcag 180

cccgccctgc	accgcccgaat	gcacttcttc	ctcttcttgc	ttagtggtgc	tgatattgga	240
ttgggtcactg	ccctgatgcc	cacactgctg	ggcatcgccc	ttgctgggtgc	tcacactgtc	300
cctgcctcag	cctgccttct	acagatgggt	tttatccatg	tcttttctgt	catggagtc	360
tctgtcttgc	tcgccatgtc	cattgatcgg	gcactggcca	tctgccgacc	tctccactac	420
ccagcgctcc	tcaccaatgg	tgtaattagc	aaaatcagcc	tggccatttc	ttttcgatgc	480
ctgggtctcc	atctgcccct	gccattcctg	ctggcctaca	tgccctactg	cctcccacag	540
gtcctaacc	attcttattg	cttgcattca	gatgtggctc	gtttggcctg	cccagaagct	600
tggtgtgcag	cctacagcct	atctgtgggt	ctttcagcca	tggtgttgga	ccccctgctt	660
atcttcttct	cctatggcct	gattggcaag	gtgttgcaag	gtgtggagtc	cagagaggat	720
cgctggaagg	ctgggtcaaac	ctgtgctgcc	cacctctctg	cagtgtcctc	cttctatctc	780
cctatgatcc	tcttggcact	gattaacctc	cctgagctgc	caatcactca	gcatacccat	840
actcttctat	cctatgtcca	tttcttctt	cctccattga	taaaccctat	tctctatagt	900
gtcaagatga	aggagattag	aaagagaata	ctcaacaggt	tcagcccag	gaaggtgggt	960
ggtgctcag						969

<210> 469

<211> 384

<212> DNA

<213> Unknown (H38g318 nucleotide)

<220>

<223> Synthetic construct

<400> 469

tctcgctcag	atacacaggt	caatgagtta	gtgttattca	ccgtcttttg	ttttattgaa	60
ctgagtacca	tttcaggagt	tttcatttct	tattgttata	tcacacctat	agtcttgag	120
atacactctg	ctgaggggag	gttcaaaagt	ctctctacat	gcacttccca	cttatctgag	180
gttgcaattt	tccaggggaa	tctgctcttt	atgtatttcc	ggccaagtgc	ttcctattct	240
ctagatcaag	ataaaatgac	ctcattgttt	tacacccttg	tggttcccat	gttgaacccc	300
ctgatttata	gcctgaggaa	caaggatgtg	aaagaggccc	tgaaaaaact	gaaaaataaa	360
atcttatttt	aaggaaatag	taaa				384

<210> 470

<211> 946

<212> DNA

<213> Unknown (H38g319 nucleotide)

<220>

<223> Synthetic construct

<400> 470

atgtttctgc	tcaatacctc	agaagttgaa	gtctccacat	tcctattgat	tggtgatacca	60
ggacttgagc	atgcacacat	ttggatctct	atccccatct	gccttatgta	cctcatggcc	120
atcctgggca	actgcacat	cctatttggt	atcagaacag	agcattccct	gcaagagccc	180
atgtactatt	tcctctccat	gctggccctg	tccgacctgg	gcctgtcttt	ctcctcccta	240
cccacgatgc	tgagaatctt	cttgttcaac	aacatgggga	tttctgctga	tacatgcatt	300
gcccaggaat	tcttcatcca	tggtattcaca	gacatggagt	cttcagttct	cctaattcatg	360
tcctttgatc	acttagtagc	catttgcaac	cccctaagat	atagctctat	tctcaccagc	420
ttcaggggtt	tgcaaatgag	actggctttt	gccattaaaa	gcattctcct	agtgtacccc	480
cttttacttt	aaagagactc	agatactgta	ataaacacct	tttatcccac	tcctactgcc	540
ttcaccagga	tgtaaatgag	ctggcctgct	ctgacaacag	gggttaacttt	tactatgggt	600
tggttggtgc	actctgcatg	atgtcagaca	gtgtttttat	tgctatttcc	tatatgtgtt	660
catcctgaag	actgtgttgg	gtattgcac	ccatggggag	tgccctgaag	ctcttgacac	720
ctgtgtgtct	catatctgtg	ctgtactcgt	cttctatgtg	cccatcatca	ccttggtctac	780
catgcgtcgc	tttgctaagc	ataaatcccc	tttagctatg	attctgatag	cagatgcatt	840
cttgctggta	ccacccttga	tgaatcccat	tgtgtattgt	gtaaaaactc	ggcagattag	900
agtaaaggct	ctggaaaaat	tggtctctgaa	gcctaaatga	tggtggc		946

<210> 471

<211> 942

<212> DNA

<213> Unknown (H38g320 nucleotide)

<220>

<223> Synthetic construct

<400> 471

atgatggcat	ctgaaagaaa	tcaaagcagc	acacccactt	ttattctctt	gggtttttca	60
gaatacccag	aaatccaggt	tccactcttt	ctggttttct	tggttcgtcta	cacagtcact	120
gtagtgggga	acttgggcat	gataataatc	atcagactca	attcaaaact	ccatacaatc	180
atgtgctttt	tccttagtca	cttgtccctg	acagacttct	gtttttccac	tgtagttaga	240
cctaaactgt	tggagaactt	ggttgtggaa	tacagaacca	tctctttctc	tggttgcatc	300
atgcaatttt	gttttgcttg	catttttggg	gtgacagaaa	ctttcatgtt	agcagcgatg	360
gcttatgacc	gttttgtggc	agtttgtaaa	cccttgctgt	ataccactat	tatgtctcag	420
aagctctgtg	ctcttctggg	ggctgggtcc	tatacatggg	ggatagtgtg	ctccctgata	480
ctcacataatt	ttcttcttga	cttatcgttt	tgtgaatcta	ccttcataaa	taattttatc	540
tgtgaccact	ctgtaattgt	ttctgcctcc	tactcagacc	cctatatcag	ccagaggcta	600
tgctttatta	ttgccatatt	caatgagggtg	agcagcctaa	ttatcattct	gacatcatat	660
atgcttattt	tcactaccat	tatgaagatg	cgatctgcaa	gtgggcgcca	gaaaaccttc	720
tccacctgtg	cctcccacct	gacagccatc	actatcttcc	atggaaactat	ccttttctct	780
tactgtgttc	ctaatacctaa	aacttctagc	ctcatagtta	cagtggcttc	tgtgttttac	840
acagtggcga	ttccaatgct	gaacccattg	atctacagcc	ttaggaacaa	agatatcaat	900
aacatgtttg	aaaaattagt	tgtcaccaaa	ttgatttacc	ac		942

<210> 472

<211> 965

<212> DNA

<213> Unknown (H38g321 nucleotide)

<220>

<223> Synthetic construct

<400> 472

cacacagagc	cacggaatca	cacaggggtc	tgagaatttc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggg	cctcgctttg	ctgtccctgt	ccctgtccat	gtatctgggc	120
acgggtgctga	ggaacctgct	cagcatcctg	gctgtccgct	ctgactcccc	cctccacaac	180
cccattgact	tcttctcttc	caacctgtgc	tgggctgaca	tcggtttcac	ctcggccacg	240
gttgccaaga	tgattgtgga	atgcagtcgc	atagcagagt	catctctcat	gcgggctgcc	300
tgacgcagat	gtctttcttg	gtcctttttg	catgtataga	aggcatgctc	ctgactgtga	360
tggcctatga	ctgctttgta	gccatctgtc	gtcctctgca	ctaccagtc	atcgtgaatc	420
ctcacctctg	tgtcttcttc	gttttggtgt	cctttttcct	tagcctgttg	gattcccagc	480
tgcacagttc	gattgtgtta	caattcacca	tcatcaagaa	tgtggaaatc	tctcattttg	540
tctgtgaccc	ctctcatctt	ctcaaacttg	cctgttctga	cagcgtcatc	aatagcatat	600
tcatatattt	cgattgtact	atgtttgggt	ttcttcccat	ttcagggatc	ccttgggtct	660
actataaaat	cgtccccctc	attctaagga	tttcatcatc	agatgggaag	tataaagcct	720
tcgccacctg	tggctctcac	ctagcagttg	tttgcgtgatt	tgatggaaca	ggcattggta	780
tgtacctgac	ttcagctgtg	gcaccacccc	ctaggaatgg	agtgggtggc	tcagtgatgt	840
aggctgtggt	cacccccatg	ctgaaccttt	tcatctacag	cctgagaaac	agggacatac	900
aaagtgcctt	gcggaggctg	ctcagcagaa	cagtcgaatt	tcatgatctg	tttcattctt	960
tttct						965

<210> 473

<211> 990

<212> DNA

<213> Unknown (H38g322 nucleotide)

<220>

<223> Synthetic construct

<400> 473

atgtcgggtc	tcaataatac	cattgctgag	cctctgatct	tcctcctgat	gggcattcca	60
ggcctgaaag	ccaccagta	ctggatctgc	atcccttttt	gtctcctata	tgttgttgcc	120

gtctctggaa	atagcatgat	cctgtttgtg	gtcctctgtg	aacggagcct	ccataagcct	180
atgtactatt	tcctctctat	gcttttcagcc	acagacctga	gcttgccct	gtgtacactt	240
tctactaccc	ttgggtgtctt	ctggtttgaa	gccccagaaa	tcaacctaaa	tgccctgcatt	300
gcccagatgt	tctttctaca	cggattttact	ttcatggagt	ctgggggttct	actggccatg	360
gcctttgatc	gttttggtggc	catctgttac	ccactgagat	acactaccat	ccttaccaat	420
gcccgaattg	ccaagattgg	gatgagcatg	ttgataagaa	atgttgccgt	catgttgcca	480
gtcatgctct	ttgtcaagag	gttgtccttc	tgcagttcta	tggtcctttc	acattcttac	540
tgctaccatg	ttgatctcat	ccaactctcc	tgcacagaca	ataggatcaa	cagcatcctt	600
ggctctgtttg	cgcttttgctc	cactacaggg	tttgactgcc	cttgcatcct	gctctcctat	660
atcctgatca	ttcgatctgt	cctcagcatt	gcttcctcag	aagagaggcg	gaaagccttc	720
aacacctgca	catcccat	cagtgtgtt	tccatcttct	acctccctct	catcagtttg	780
tctcttgctc	atcgctatgg	ccattcagca	cctccatttg	tccacatcat	catggccaat	840
gtctttctgc	taatccctcc	tgtgtccaac	cctattattt	acagtgtaaa	gattaagcag	900
attcaaaagg	ccattatcaa	ggtcttaatt	cagaagcact	ccaaatctaa	tcacagcta	960
tttctgatta	gagataaagc	catttatgaa				990

<210> 474

<211> 942

<212> DNA

<213> Unknown (H38g323 nucleotide)

<220>

<223> Synthetic construct

<400> 474

atgatgatgg	ttttaaggaa	tctgagcatg	gagccacact	ttgccctttt	aggtttcaca	60
gattacccaa	agcttcagat	tcctctcttc	cttggtgttc	tgctcatgta	tggtatcaca	120
gtggtaggaa	accttgggat	gatcataata	atcaagatta	accccaaatt	tcacactcct	180
atgtactttt	tccttagtca	cctctctttt	gttgattttt	gttactcttc	catgtgcaact	240
cccaagctgc	ttgagaactt	ggtaatggca	gataaaaagca	tcttctactt	tagctgcatg	300
atgcagtaact	tcctgtcctg	cactgctgtg	gtgacagagt	ctttcttgct	ggcagtgatg	360
gcctatgacc	gctttgtggc	catctgcaat	cctctgcttt	atacagtgcc	catgtcacag	420
aggctctgtg	ccctgtctgg	ggctgggtca	tatctctggg	gcatgtttgg	ccccttggtg	480
ctcctttgtt	atgctctcgg	gttaaaactt	tctggacctt	atgtaatcaa	ccacttcttt	540
tgtgagtata	ctgctctcat	ctctgtgtct	ggctctgata	tactcatccc	ccacctgctg	600
cttttcagct	tcgccacctt	caatgagatg	tgtacactac	tgatcatcct	cacttcctat	660
gttttcattt	ttgtgactgt	actaaaaatc	cgttctgtta	gtgggcgcca	caaagccttc	720
tccacctggg	cctccacact	gactgctatc	accatcttcc	atgggacctt	ccttttctct	780
tactgtgtac	ccaactccaa	aaactctcgg	caaacagtca	aagtggcctc	tgtattttac	840
acagttgtca	accccatgct	gaacctccg	atctacagcc	taaggaataa	agacgtgaag	900
gatgctttct	ggaagttaat	acatacacia	gttccatttc	ac		942

<210> 475

<211> 942

<212> DNA

<213> Unknown (H38g324 nucleotide)

<220>

<223> Synthetic construct

<400> 475

atggtgctgg	cttcagggaa	cagctcttct	catcctgtgt	ccttcacact	gcttggaaac	60
ccaggcctgg	agagtttcca	gttggtgatt	gcctttccgt	tctgtgccac	gtatgctgtg	120
gctgtgtgtg	gaaatatcac	tctcctccat	gtaatcagaa	ttgaccacac	cctgcatgag	180
cccatgtacc	tctttctggc	catgctggcc	atcactgacc	tggtcctctc	ctcctccact	240
caacctaaaga	tggtggccat	attctggttt	catgctcatg	agattcagta	ccatgcctgc	300
ctcatccagg	tggtcttcat	ccatgccttt	tcttctgtgg	agtctggggt	gctcatggct	360
atggccctgg	actgctacgt	ggctacctgc	ttccactcc	gacactctag	catcctgacc	420
ccatcggtcg	tgatcaaaact	ggggaccatc	gtgatgctga	gagggctgct	gtgggtgagc	480
cccttctgct	tcatggtgtc	taggatgcc	ttctgccaac	accaagccat	tccccagtca	540
tactgtgagc	acatggctgt	gctgaagttg	gtgtgtgctg	atacaagcat	aagtcgtggg	600

tatgggctct	ttgtggcctt	ctctgtggct	ggctttgata	tgattgtcat	tggtatgtca	660
tacgtgatga	ttttgagagc	tgtgcttcag	ttgccctcag	gtgaagcccg	cctcaaagct	720
tttagcacac	gtgcctccca	tatctgtgtc	atcttggctc	tttatatccc	agcccttttt	780
tctttccctca	cctaccgctt	tggccatgat	gtgccccgag	ttgtacacat	cctgtttgct	840
aatctctatc	tactgatacc	tcccatgtct	aaccccatca	tttatggagt	tagaaccaaa	900
cagatcgggg	acaggggtat	ccaaggatgt	tgtggaaaca	tc		942

<210> 476

<211> 860

<212> DNA

<213> Unknown (H38g325 nucleotide)

<220>

<223> Synthetic construct

<400> 476

tatatattgt	tagacatata	tatatgtcta	aacaacactc	atgtctaatt	gtgtgtagag	60
tcactagagg	caatttaaaa	taagttttta	tttttctttt	tttctattgg	caataacatg	120
attttagtga	taaattttta	taattatgaa	aacataacag	tactttttta	aacataaaca	180
tttaaagaaa	aagttttcat	gattcttgta	tacatcttaa	catacatact	ctccctttta	240
agtaagtctt	ttgcattgtt	taaactcttg	cagacaaaagc	ttttcaagag	caagtcagtg	300
gaaactagta	gagcaggagt	tgagaaagcc	ctgtgcatta	tacactcacc	atgtcccaga	360
agttttgtct	catccatcca	gcaggatggt	agaccagggc	atataatcta	tccccggtca	420
ctcattttct	cattgtattg	cctattgtgg	gcacaatgta	gttaatatat	tttaaaataa	480
atattctgtt	gccatttcag	attcgtgagt	tcactctggat	agcggatttt	tgtttgtttg	540
tttgttttgc	tttagtcaat	tttgattaat	taaggaaatct	cagagtcctc	actccttagc	600
tttcattttc	aacttgtcta	aaaggcactt	tctgccagtg	cacatcaacc	ttctccacc	660
atttcccaca	tttccaccat	ccttccctcac	tctagtgcac	taactccaaa	aactcacagg	720
caactgtgaa	agcacactct	gtatgttatg	ccatgttaat	ccccatgctg	aactcacaga	780
ctttagcat	gcggtacaaa	aatgtgaatg	aatctctgca	gaagctgatg	gacttcaaaa	840
tattttagca	ttgaaagcaa					860

<210> 477

<211> 966

<212> DNA

<213> Unknown (H38g326 nucleotide)

<220>

<223> Synthetic construct

<400> 477

agtcacacag	agccatagaa	tctcacaagt	gtctcagaat	tcctttctcca	gggactctca	60
gaggatccag	aactgcagcc	cgctctcgct	gggctgtccc	tgtccatgta	cctgggtcacg	120
gtgctgagga	acctgctcat	catcctggct	gtcagctctg	actcccacct	ccacaccccc	180
atgtacttct	tcctctccaa	cctctcctgg	gctgacattg	gtttcacctc	ggccatgggt	240
cccaagatga	ttgtggacat	gcagtcgcac	agcagagtca	tctcttaagc	gggctgcctg	300
acacagatgt	ctttctttgt	cctttttgca	tgtatagaag	acatgctcct	gactgtgatg	360
gcctatgacc	aatttgtggc	catctgtcac	ccctgcacta	cccagtcac	atgaatcctc	420
acctctgtgt	cttcttagtt	ttggtttctt	tttctcttag	cctgttggat	tcccagctgc	480
acagttggat	tgtgttacaa	ttcaccttct	tcaagaatgt	ggaaatctct	aattttttct	540
gtgatccatc	tcaacttctc	aaccttgect	gttctgacgg	catcatcaat	agcatattta	600
tatatattaga	tagtattctg	ttcagttttc	ttcccatctc	agggatcctt	ttgtcttact	660
ataaaattgt	cccctccatt	ctaagaattt	catcgtcaga	tgggaagtat	aaagccttct	720
ccatctgtgg	ctctcacctg	gcagttgttt	gcttatctta	tgggaacaggc	attggcggtg	780
acctaacttc	agctgtgtca	ccacccccag	gaatgggtgtg	gtggcgctcag	tgatgtatgc	840
tgtgggcacc	cccatgtgta	actcttttat	ctacagcctg	agaaacaggg	acattcaaag	900
cgccctgtgg	aggctgcgca	gcagaacagt	cgaatctcat	gatctgttcc	atccttatct	960
ttgtgt						966

<210> 478

<211> 951

<212> DNA

<213> Unknown (H38g327 nucleotide)

<220>

<223> Synthetic construct

<400> 478

atgcaaccat	ataccaaaaa	ctggacccag	gtaactgaat	ttgtcatgat	gggcttttgc	60
ggcatccatg	aagcacacct	cctcttcttc	atactcttcc	tcaccatgta	cctgttcacc	120
ttgggtggaga	atttggccat	catttttagtg	gtgggttttg	accaccgact	acggagaccc	180
atgtatttct	tectgacaca	cttgtcctgc	cttgaaatct	ggtacacttc	tgttacagtg	240
cccaagatgc	tggtctgttt	tattgggtg	gatgggtggca	agaatatctc	ttatgctggg	300
tgccctatccc	agctcttcat	cttcaccttt	cttggggcaa	ctgagtgttt	cctactggct	360
gccatggcct	atgatcggtta	tgtggccatt	tgtatgcctc	tccactatgg	ggcttttttg	420
tcctggggca	cctgcatccg	tctggcagct	gcctgttggt	tggtagggtt	cctcacaccc	480
atcttgccaa	tctacctctt	gtctcagcta	acatttttgg	gccccaaatgt	cattgaccat	540
ttctcctgtg	atgectcacc	cttgctagcc	ttgtcgtgct	cagatgtcac	ttggaaggag	600
actgtggatt	tcctgggtgtc	tctggctgtg	ctactggcct	cctctatggt	cattgctgtg	660
tcctatggca	acatcggtcg	gacactgctg	cacatccgct	cagctgctga	gcgctggaag	720
gccttctcta	cctgtgcagc	tcacctgact	gtgggtgagcc	tcttctatgg	cactcttttc	780
tttatgtatg	tccagaccaa	ggtgacctcc	tccatcaact	tcaacaagggt	ggtatctgtc	840
ttctactctg	ttgtcacgcc	catgctcaat	cctctcatct	acagtcttag	gaacaaggaa	900
gtgaaggagg	ctctgggtcg	agtcttttct	ctcaactttt	ggaagggaca	g	951

<210> 479

<211> 936

<212> DNA

<213> Unknown (H38g328 nucleotide)

<220>

<223> Synthetic construct

<400> 479

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tgggagatcc	agctcctcct	cctagtgttt	tctctgtgc	tctatgtggc	aagcattact	120
ggaaacatcc	tcatttgtgt	ttctgtgacc	actgaccctc	acttacactc	ccccatgtac	180
tttctactgg	ccagtctctc	cttcattgac	ttaggagcct	gctctgtcac	ttctcccaag	240
atgatttatg	acctgttcag	aaagcgcaaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcgt	tgggtgtgtg	gagatgggtc	tgctcatagc	catggccttt	360
gacagatatg	tggccctatg	taagccccct	cactatctga	ccattatgag	cccaagaatg	420
tgcctttcat	ttctgggtgt	tgcctggacc	cttgggtgtc	gtcactccct	gttccaactg	480
gcatttcttg	ttaatttacc	cttctgtggc	cctaattgtg	tggacagctt	ctactgtgac	540
cttcctcagc	ttctcagact	agcctgtacc	gacacctaca	gattgcagtt	catggctact	600
gttaacagtg	ggtttatctg	tgtgggtact	ttcttcatac	ttctaattct	ctacatcttc	660
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tcagctcaca	gcacagcggt	ccttttgttc	tttgggtccac	ccatgtttgt	gtatacatgg	780
ccacacccta	attcacagat	ggacaagttt	ctggctattt	ttgatgcagt	tctcactcct	840
tttctgaatc	cagttgtcta	tacattcagg	aataaggaga	tgaaggcagc	aataaagaga	900
gtatgcaaac	agctagtgat	ttacaagaag	atctca			936

<210> 480

<211> 668

<212> DNA

<213> Unknown (H38g329 nucleotide)

<220>

<223> Synthetic construct

<400> 480

gtgaggcacc	ccctgcgatg	cggaagtaa	gagccagccc	ctctcccacc	cctggctctt	60
aggaacccca	tcattgacctc	gtgtttctgt	ggctttctag	ttttgtcttt	tttttttttt	120

ttctcagtc	tttagacgcc	cagctgcaca	acttgattgc	cttacaaatg	acctgcttcc	180
aggatgcgga	aattcctagt	ttcttctgtg	acccttctca	actccccat	cttgcattgt	240
gtgacacctt	caccaataac	ataatcatgt	atttgcctgc	tgccatattt	ggttttcttc	300
ccatctcggg	gaccttttct	tcttactata	aaattgtttc	ctccattctg	agggtttcat	360
catcacgtgg	gaagtataag	gccttctcca	cctgtgggtc	tcacctgtca	gttgtttgtc	420
gattttacgg	aacaggcttt	ggagggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	480
aggctgcagt	ggcctcagtg	atgtacacgg	tgatcacctc	catgctgaac	cccttcatct	540
acagcctgag	aaacagggat	attaaagggtg	tcttgcggca	gccgcacggc	agcaccgtcc	600
aatttcagta	tcttcttata	tgttccattc	ctttttagtg	gtgggttaaa	aaaggcagca	660
agggtcaaa						668

<210> 481

<211> 840

<212> DNA

<213> Unknown (H38g330 nucleotide)

<220>

<223> Synthetic construct

<400> 481

atgtacctgg	tcacgggtgct	gaggaacctg	ctcatcatcc	tggtgtgcag	ctctgactcc	60
cacctccaca	cccccatgtg	cttcttcttc	tccaacctgt	gctgggctga	catcgggttc	120
acctcggcca	tggttcccaa	gatgattgtg	gacatgcagt	cgcatagcag	agtcattctc	180
tatgctgggt	gcctgacaca	gatgtctttc	tttgcctttt	ttgcatgtat	agaagacatg	240
ctcctgacag	tgatggccta	tgaccgattt	gtggccatct	gtcacccctc	gcactaccca	300
gtcatcatga	atcctcacct	tggtgtcttc	ttagtttttg	tgtccttttt	cctcagcctg	360
ttggattccc	agctgcacag	ttggattgtg	ttacaattca	ccttcttcaa	gaatgtggaa	420
atctccaatt	ttgtctgtga	cccatctcaa	cttctcaacc	ttgcctgttc	tgacagtgtc	480
atcaatagca	tattcatata	tttagatagt	attatgtttg	gttttcttcc	catttcaggg	540
atccttttgt	cttacgctaa	caatgtcccc	tccattctaa	gaatttcata	atcagatagg	600
aagtctaaaag	ccttctccac	ctgtggctct	cacctggcag	ttgtttgctt	attttatgga	660
acaggcattg	gcgtgtacct	gaattcagct	gtgtcaccac	cccccaggaa	tggtgtgggtg	720
gcatcagtga	tgtacgctgt	ggtcaccccc	atgctgaacc	ctttcatcta	cagcctgaga	780
aatagggaca	ttcaaagtgc	cctgtggagg	ctgcgcagca	gaacagtcga	atctcatgat	840

<210> 482

<211> 924

<212> DNA

<213> Unknown (H38g331 nucleotide)

<220>

<223> Synthetic construct

<400> 482

atggaaacac	agaacctcac	agtgggtgaca	gaattcattc	ttcttggtct	gacctcagtc	60
caagatgctc	aacttctggg	ctttgtgcta	gtcttaattt	tctaccttat	catcctccct	120
ggaaattttc	tcatcatttt	caccataaag	tcagaccttg	ggctcacagc	ccccctctat	180
ttctttcttg	gcaacttggc	cttactggat	gcactctact	ccttcattgt	ggttcccagg	240
atgttggtgg	acttctctc	tgagaagaag	gtaattctct	atagaagctg	catcactcag	300
ctctttttct	tgcattttct	tggagcggga	gagatgttcc	tctctgttgt	gatggccttt	360
gacctctaca	tcgccatctg	ccggccttta	cactattcaa	ccatcatgaa	ccctagagcc	420
tgctatgcat	tatcgttggg	tctgtggctt	gggggcttta	tccattccat	tgtacaagta	480
gcccttatcc	tgcacttgcc	tttctgtggc	ccaaaccagc	tcgataaact	cttctgtgat	540
gttccacagg	tcataagctg	ggcctgcacc	aatacctttg	tggtggagct	tctgatggtc	600
tccaacagtg	gcctgctcag	cctcctgtgc	ttcctgggcc	ttctggcctc	ctatgcagtc	660
atcctctgtc	gtataaggga	gcactcctct	gaaggaaaga	gcaaggctat	ttccacatgc	720
accacccata	ttatcattat	atttctcatg	tttggacctg	ctattttcat	ctacacttgc	780
cccttccagg	ctttccagc	tgacaaggta	gtttctcttt	tccatactgt	catctttcct	840
ttgatgaacc	ctgttattta	tacgcttcgc	aaccaggagg	tgaaagcttc	catgaggaag	900
ttgttaagtc	aacatatgtt	ttgc				924

<210> 483
 <211> 457
 <212> DNA
 <213> Unknown (H38g332 nucleotide)

<220>
 <223> Synthetic construct

<400> 483
 gggatgagaa aggaacaagc tgtctgtggt agtcatccat gattgagatg atgtgtggac 60
 cctgagtcag actacctggt tcaaatgcag gctctctact ttttaccat ttgatcttgg 120
 cctgtggctc tctactttct atccatttca tcttggactt gtggcctctc atacctcatc 180
 ttccttacag tcttccatat gaaatccccc taaagtagga acaaagcttt ggccaactgc 240
 tcttcccatc tttccgtggt ctttacttag gaactgtgtg tttaataac gtgacacagg 300
 gtttctccca catccctgag cagaaacaag ctgtgtctgt attttgcact gtactcaccc 360
 ccatgctaaa cccctcatc tacatcctga gaaacaagga tgtggtggg ctcttcagaa 420
 agttctggga acacatcaag tctctaaaca gaacaca 457

<210> 484
 <211> 972
 <212> DNA
 <213> Unknown (H38g333 nucleotide)

<220>
 <223> Synthetic construct

<400> 484
 atgtctttct tctttgtaga cttaagaccc atgaacaggt cagcaacaca catcgtgaca 60
 gagtttattc tcttgggatt ccctgggtgc tggaaagattc agattttcct cttctcattg 120
 tttttggtga tttatgtctt gaccttgctg ggaaatggag ccatcatcta tgcagtgaga 180
 tgcaaccac tactacacac ccccatgtac tttctgctgg gaaattttgc cttccttgag 240
 atctggtatg tgtcctccac tatctctaac atgctagtca acattctctc caagaccaag 300
 gccatctcat tttctgggtg ctctctccag ttctatttct tcttttctact gggaacaact 360
 gaatgtctct tcttggcagt aatggcttat gatcgatacc tggccatctg ccaccactg 420
 cagtaccctg ccatcatgac tgtaagggtc tgtggtgaagc tgggtgtctt ctgttggctt 480
 attggattcc ttggataccc aattcccat ttctacatct cccaactccc cttctgtggt 540
 cctaatatca ttgatcactt cctgtgtgac atggaccat tgatggctct atcctgtgcc 600
 ccagctccca taactgaatg tattttctat actcagagct ccctgtcct ctttttctact 660
 agtatgtaca ttcttcgatc ctatatcctg ttactaacag ctgtttttca ggtcccttct 720
 gcagctggtc ggagaaaagc cttctctacc tgtggttctc atttggttgt ggtatctctt 780
 ttctatggga cagtcatggt aatgtatgta agtcctacat atgggatccc aactttattg 840
 cagaagatcc tcacactggt atattcagta acgactcctc tttttaatcc tctgatctat 900
 actcttcgta ataaggacat gaaactcgtc ctgagaaatg tctgttttg aatgagaatt 960
 cgtcaaaatt cg 972

<210> 485
 <211> 945
 <212> DNA
 <213> Unknown (H38g334 nucleotide)

<220>
 <223> Synthetic construct

<400> 485
 atggccaaca tcaccaggat ggccaaccac actggaaagt tggatttcat cctcatggga 60
 ctcttcagac gatccaaaca tccagctcta cttagtgtgg tcatctttgt ggttttctgt 120
 aaggcgttgt ctggaaatgc tgtcctgac cttctgatac actgtgacgc ccacctccac 180
 agcccatgt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
 actgtgcca agatgtcct ggaccaggtc atgggtgtga ataaggctc agccctgag 300
 tgtgggatgc agatgttct ctatctgaca ctagcaggtt cggaattttt cttctagcc 360
 accatggcct atgaccgcta cgtggccatc tgccatctc tccgttacc tgcctcatg 420

aaccataggg	tctgtctttt	cctggcatcg	ggctgctggt	tcctgggctc	agtggatggc	480
ttcatgctca	ctcccatcac	catgagcttc	cccttctgca	gatcctggga	gattcatcat	540
ttcttctgtg	aagtcctgc	tgtaacgatc	ctgtcctget	cagacacctc	actctatgag	600
accctcatgt	acctatgctg	tgctctcatg	ctcctcatcc	ctgtgacgat	catttcaagc	660
tcctattttac	tcatectctc	caccgtccac	aggatgaact	cagcagaggg	ccggaaaaag	720
gcctttgcca	cctgctcctc	ccacctgact	gtggctcatcc	tcttctatgg	ggctgccgtc	780
tacacctaca	tgctccccag	ctcctaccac	acccctgaga	aggacatgat	ggtatctgtc	840
ttctatacca	tcctcactcc	gggtgctgaac	cctttaatct	atagtcttag	gaataaggat	900
gtcatggggg	ctctgaagaa	aatgttaact	gtgagattcg	tcctt		945

<210> 486

<211> 759

<212> DNA

<213> Unknown (H38g335 nucleotide)

<220>

<223> Synthetic construct

<400> 486

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gattatctca	tggggcgagg	gaccatctct	ttcatgcgct	gcactgctca	gtgctttctc	120
tacatgggct	ttatgggggc	tgaattcttc	ctgctggggc	tcatggccta	tgaccgctac	180
gtggccatct	gcaacccact	gcgctatcct	gtcctcatca	gctggcgggt	ctgctgggatg	240
atcctggcca	gctcttgggt	cggtggggct	ttggacagtt	ttctcctcac	ccccattacc	300
atgagtctcc	cgttctgtgc	ctctcaccaa	atcaatcact	ttttctgtga	ggcaccacc	360
atgctgaggc	tggcctgtgg	ggacaaaacc	acctatgaaa	cagtgatgta	tgtgtgctgc	420
gttgcaatgc	tgctgatccc	cttctcggtg	gtgactgcat	cctacaccag	gattctcatc	480
acagtgcac	agatgacatc	ggctgaaggg	aggaagaagg	cctttgccac	ctgctcttca	540
cacatgatgg	tggtgacatt	gttctatggg	gctgccttgt	atacgtatac	gcttccccaa	600
tcttaccaca	ccccaatcaa	agataaggtc	ttctctgcct	tttataccat	cctcacaccc	660
ttattaaacc	ctctcatcta	cagtctgagg	aacagggatg	tgatgggtgc	cttgaagaga	720
gttggtggca	gatgttaggg	gacatgtggt	gtgatgagg			759

<210> 487

<211> 857

<212> DNA

<213> Unknown (H38g336 nucleotide)

<220>

<223> Synthetic construct

<400> 487

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ttttttttgt	ccccctcatg	cccattctct	atcgagtggt	ctaagagtgc	agtcagcttc	120
gtgtcacaga	gcaggcgcat	tagatttttg	ggctgtgaca	ttcaaacggg	atgtgttcct	180
gggccctgg	gggaactgaa	gcccttctct	ttggttttat	gtcttatgat	cgctatgtag	240
ctatctgtca	ccctttacat	tatcctatgc	ttatgagcaa	gaagatctgc	tgccctcatgg	300
ttgcatgtgc	atggggccagt	ggttctatca	atgctttcat	acatacattg	tatgtgtttc	360
agcttccatt	ctgtaggtct	cggtcatta	accacttttt	ctgtgaagtt	ccagctctac	420
tatcattggt	gtgtcaggac	acctcccagt	atgagtatac	agtcctcctg	agtggactta	480
ttatcttgct	actaccattc	ctagccattc	tggcttccta	tgctcgtgtg	cttattgtgg	540
tattccagat	gagctcagga	aaaggacagg	caaaagctgt	ttccacttgt	tcctccacc	600
tgattgtggc	aagcctgttc	tatgcaacca	ctctctttac	ctacacaagg	ccacactcct	660
tgcgttcccc	ttcacgggat	aaggcggtgg	cagtatttta	caccattgtc	acacctctac	720
tgaacccatt	tatctacagc	ctgagaaata	aggaagtgac	gggggcagtg	aggagactgt	780
tgggatattg	gatatgctgt	agaaaatatg	acttcagatc	tctgtattga	ttgagcatta	840
acaacataaa	aagctgt					857

<210> 488

<211> 812

<212> DNA

<213> Unknown (H38g337 nucleotide)

<220>

<223> Synthetic construct

<400> 488

agaagggaca	ttttctat	tttgccttcatt	tgtagctatt	catgactgac	tctccgttct	60
tttgtctact	tgttcatccg	tccatccatc	catccatcca	tccactcagc	cattcttttg	120
ttcaacagtg	atttactgaa	ttccttacta	tgactcttct	atatttgaca	tgccacacga	180
tggttcagcaa	tgacttctac	tcaagagcta	gttttttagtt	tcacactgct	tttctcttgt	240
tctttatctt	ttgcttttgt	agctcagaac	agaaaaatct	atagaaaaga	tcttgctacc	300
aggctatggg	accctcttgt	ccatggcgat	atcttactgt	ctttgtgtct	ttgggctgag	360
caatcctgca	gcatgggtga	tgctcaataa	tgctcatgga	acaaaatggg	gtgggttcctc	420
ttccaggaag	tgctgccatc	tctcttttga	ttgagaatag	gtttacctag	gtgattacat	480
cactaacatt	gtattcctgt	gatttcttcc	tcatgatagg	acagatttta	ctaaaaagtc	540
aaaaattatt	tattacatta	tgccgttcc	cttacttttc	atgccagatt	aaattttctt	600
ggctcttcaa	tgcccatctc	taatatcaat	aaacaagtaa	cctttcccca	acctactgaa	660
gtcgcgatgt	ggaattgggc	attctttctg	ttgattccat	atcatccctt	tcattcttct	720
gtctgcccgt	ttgtccatcc	atttatccat	ccacttagct	attcgttcgt	tcaacaatga	780
tttagtgaat	acctacttac	tgtgacccta	tt			812

<210> 489

<211> 931

<212> DNA

<213> Unknown (H38g338 nucleotide)

<220>

<223> Synthetic construct

<400> 489

atgtcattag	ctgaaggaaa	tcagagttct	ggagccgtat	ttaccctctt	gggcttctca	60
gaatatgcag	acctccaggt	tcctctgttc	ctggctcttc	tgaccatcta	cacaatcact	120
gtattgggaa	acctgggcat	gatcatgata	atcaggatca	accccaaact	ccacaccgcg	180
atgtactttt	tcctcagcca	cttgtccttt	gttgatttct	gttattccac	cacagttaca	240
cccaaactgc	tggagaactt	ggttgtggaa	gacagaacca	tctccttcac	aggatgcatc	300
atgcaattct	tcctggcggt	tatatgtgca	gtggcagaaa	cattcatgct	ggcagtgatg	360
gcctatgatt	gatacgtggc	gggtgtgtaac	cctttgtctc	acacagttgt	caggtcccag	420
aaactctgtg	catcattagt	ggcagggccc	tacacatggg	gtataatctc	ttctctgaca	480
ctcacctatt	tcctcttgtc	attatccttc	tgtgggtcta	acatcatcaa	taattttgtc	540
tgtgagcact	ctgtcatcat	ctctgtctcc	tgctctgacc	cctacatcag	ccaaatgctt	600
tgttttgtca	ttgcaatatt	caatgagggt	agcagcttgg	gagtcacctt	cactacctat	660
attttcatct	ttattgctgt	cataaaaatg	ccttctgctg	ttgggcacca	aaaagctttc	720
tctacctgtg	cttcccacct	gactgccatc	actattttcc	acgggactgt	cctgttcctt	780
tattgtgtac	ccaactccaa	aaactcatgg	ctcatagtca	aagtaggttc	tgtgttttat	840
acagtcatca	tccccacgtt	gaacccttta	acctacagcc	tcaggaacaa	agacgtgaaa	900
gagagtgttc	gaaagttaat	gaatcactca	a			931

<210> 490

<211> 651

<212> DNA

<213> Unknown (H38g339 nucleotide)

<220>

<223> Synthetic construct

<400> 490

ttcttgggtcc	tttttgcatt	tatagaagac	atgttccctga	ctgtgatggc	ctatgactgc	60
tttatagcca	tctgtcatcc	tctgcactac	ccagtcactg	tgaatcctca	cctctgtgtc	120
ttcttcattt	tggtgtcctt	tttcccttagc	ctgttggatt	cccagctgca	tagctggatt	180
gtgttacaat	tcaccatcat	caagaatgtg	gaagtctcta	attttgtctg	tgaccctctt	240
caacttctca	aacttgccgt	ttctgacagc	gtcatcaata	gcatattcat	atatttcgat	300

aatactatgt	ttgggttttct	tcccatttca	gggatccttt	ggctttacta	taaaatcgtc	360
ccctacattc	tcaggatttc	atcgtcagat	gggaagtata	aagccttcgc	cacctgtggc	420
tctcacctgg	cagttgcttg	ctgattttat	ggaacaggca	ttggcatgta	cctgaactca	480
gctgtgtcac	cacccccag	gaatgggtgtg	gtggcatcag	tgatgtacgc	tgtggtcacc	540
cccatgctga	acctttttat	ctacagcctg	agaaacaggg	acatacaaag	tgccctgcgg	600
aggctgcgcc	ccagaacagt	cgaatctcat	gatctgttcc	atcctttttc	t	651

<210> 491

<211> 933

<212> DNA

<213> Unknown (H38g340 nucleotide)

<220>

<223> Synthetic construct

<400> 491

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cctgagttga	gagtcctgct	cttcctgctg	ttccttctca	tctatggagt	cacgttggtta	120
gccaatctgg	gcatgactgc	actgattcag	gtcagctctc	ggctccacac	ccccgtgtac	180
tttttctctca	gccacttgct	ctttgtagat	ttctgctact	cctcaataat	tgtgccaaag	240
atggttggtca	atatcttttaa	caaggacaaa	gccatctcct	tcctaggggtg	catgggtgcaa	300
ttctacttgt	tttgacacatg	tggagtcact	gaggtcttcc	tgctggccgt	gatggcctat	360
gaccgctttg	tggccatctg	taacccccctg	ctgtacatgg	tgaccatgtc	tcagaagctg	420
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attctcacca	ctatcctgaa	gatacactct	gcagagagca	ggcacaaagc	tttctccacc	720
tgtgcctccc	acctcacagc	catcactgtc	tcccattgga	caatccttta	catttattgc	780
aggccgagtt	caggcaacag	tggagatggt	gacaaagtgg	ccaccgtgtt	ctacacagtt	840
gtgattccca	tgctgaaccc	cctgatctac	agcctgagaa	ataaggatgt	gaacaaagct	900
ctcagaaaag	tgatgggctc	caaaattcac	tcc			933

<210> 492

<211> 963

<212> DNA

<213> Unknown (H38g341 nucleotide)

<220>

<223> Synthetic construct

<400> 492

atgtttctga	cagagagaaa	tacgacatct	gaggccacat	tcactctctt	gggcttctca	60
gattacctgg	aactgcaaat	tcccctcttc	tttgtatttc	tggcagtcta	cggcttcagt	120
gtggtaggga	atcttgggat	gatagtgate	atcaaaaatta	acccaaaatt	gcataccccc	180
atgtattttt	tcctcaacca	cctctccttt	gtggatttct	gctattcctc	catcattgct	240
cccatgatgc	tggtgaacct	ggttgtagaa	gatagaacca	tttcattctc	aggatgtttg	300
gtgcaattct	ttttcttttg	cacctttgta	gtgactgaat	taattctatt	tgcggtgatg	360
gcctatgacc	actttgtggc	catttgcaat	cctctgctct	acacagttgc	catctcccag	420
aaactctgtg	ccatgetggg	ggttgatttg	tatgcatggg	gagtcgcatg	ttccctgaca	480
ctcgcgtgct	ctgctttaaa	gttatctttt	catggtttca	acacaatcaa	tcatttcttc	540
tgtgagttat	cctccctgat	atcactctct	taccctgact	cttatctcag	ccagttgctt	600
cttttcactg	ttgccacttt	taatgagata	agcacactac	tcattcattct	gacatcttat	660
gcattcatca	ttgtcaccac	cttgaagatg	ccttcagcca	gtgggcaccg	caaagtcttc	720
tccacctgtg	cctcccacct	gactgccatc	accatcttcc	atggcaccat	cctcttcctc	780
tactgtgtac	ccaactccaa	aaactccagg	cacacagtca	aagtggcctc	tgtgttttac	840
accgtgggtga	tccccttggt	gaatcccctg	atctacagtc	tgagaaataa	agatgttaag	900
gatgcaatcc	gaaaaataat	caatacaaaa	tattttcata	ttaaacatag	gcattgggtat	960
cca						963

<210> 493

<211> 303
 <212> DNA
 <213> Unknown (H38g342 nucleotide)

<220>
 <223> Synthetic construct

<400> 493
 tgttgcccac tccaccacca ttacctgcct agacagtcac tggatcagct cacataactta 60
 attgctttga ttttcaattt tctctttgtt tttggcctcc agagttcctt tattttctta 120
 aaggcatgac agtgctttcc aaaggatata cactatattt tcgttaaggc gagaagggtc 180
 tcaggttatc taacctacca tattgctgga aatagaagtt aaaccgtttt tttcctagtc 240
 tgtaactgcc actattatgg tgatgatata ggctaagctc gaatatttta tgtgaacata 300
 tta 303

<210> 494
 <211> 957
 <212> DNA
 <213> Unknown (H38g343 nucleotide)

<220>
 <223> Synthetic construct

<400> 494
 atgcctgtgg ggaaacttgt cttcaaccag tctgagccca ctgagtttgt gttccgtgcg 60
 ttcaccacag ccactgaatt ccagggttctt ctcttccttc tcttctcct cctctacttg 120
 atgatcctct gtggcaacac agccatcctc tgggtggtgt gcacacacag caccctccgc 180
 accccgatgt atttcttctt gtccaacctg tcttctctgg aactctgcta caccaccgtg 240
 gtagtaccct tgatgctttc caacattttg ggggcccgaga agcccatctt gttggctgga 300
 tgtggggccc aaatgttctt ctttgtcacc ctcggcagca cggactgttt cctcttggcg 360
 atcatggcct atgaccgcta tgtggctatc tgccaccgc tgcactacac cctcatcatg 420
 acccgcgagc tgtgcacgca gatgctgggt ggggccctgg gcctggccct ctccctctcc 480
 ctgcagctca ccgccttaat cttcaccctg cctttttgcg gccaccacca ggaaatcaac 540
 cacttctctt gcgatgtgcc tcccgctctg cgctggcct gcgctgacat ccgcgtgcac 600
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 gtctctacg tgttcacac ctgtgccatc ctgagcatcc gttctgccga gggccgcccgc 720
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 ttgggtctaca cctttgtcac ccccttacc caccctttgc tttacagcct taggaacaag 900
 gatgtcaaag gtgctctgag gagtgccatt atccgtaaag cagcctctga cgccaac 957

<210> 495
 <211> 624
 <212> DNA
 <213> Unknown (H38g344 nucleotide)

<220>
 <223> Synthetic construct

<400> 495
 atggagctgg agaatggcac tgtgaagact gggttctttc tcttgggatt cagcgaccat 60
 ctggaacttc agagtctcct ttttgagaaa tttttttcca tctactctgt tactctgatg 120
 gggaaccttg gaatgatttt attaatacaca atcagttccc acttgacacac tctatgtac 180
 tttttctctt gtgtgttgtc cttcatagat gcattgctact cttctgtcat tgctcccaaa 240
 ttacttgtga acttggtttc tgaaaagaag accatttctt acaatggctg tgttgacag 300
 ttatatttct tctgtctttt agttgacaca gaatctttcc tcttggctgc catggcttaa 360
 gaccggatca tagcaatctg taaccgcgtg ctctatacag tgattatgtc caagaagggt 420
 tgttgccagc ttgcaattgg agcatttttg gggggcacta tgagctcaat tattcatacc 480
 acgaacactt tccatctgtc attctgtctc agagatatta accatttctt ttgtgatatc 540
 tccccactct tctctctgtc ctgcactgac acatacatgc atgacatcat tctggtgggtc 600
 tttgccagtt ttgtggaagc aatc 624

<210> 496
 <211> 963
 <212> DNA
 <213> Unknown (H38g345 nucleotide)

<220>
 <223> Synthetic construct

<400> 496
 cacacagagc cacggaatct cacaggtgtc tcagaattcc tctctctggg actctcagag 60
 gatccagaac tgcagcctgt cctccctggg ctgtccctgt ccatgtatct gctcacgggtg 120
 ctgaggaacc tgctcatcat cctggctgtc agctctgact cccacctcca ccccccatg 180
 tacttcttcc tctccaaccc gtcattgggt gacatcgctt tcacctcggc cacagtcccc 240
 aagatgattg tggacatgca gtcgcatagc agtcactctt tatgcaagct gcctgacaca 300
 gatgtctttc tttgcccttt ttgcatgcat agaagatcat gctcctgatt gtgatggcct 360
 atgaccgatt tgtagccgtc tgtcactccc cacactaccc agtcactcatg aatcctcgcc 420
 tcgggtgtctt ctctggtttt gtgtcctttt tccttagcct gttggattcc cagctgcaca 480
 gttggactgt gttacaattc acctcttcca agaattgtga aatctctaata tttgtctgtg 540
 acctatctca acttctcaac cttgcctgtt ctgacagcgt catcgatagc atattcatat 600
 atttagatag tactatgttt cgttttcttc cgatttcagg gatccttttg tcttactcta 660
 acattgtccc ctccattcta agaatttcat catcagatgg gaagtctaaa gccttctcca 720
 cctgtcgtc tcacctggca gttgtttgct tattttatgg aacaggcatt ggcgtgtacc 780
 tgacttcagc tgtggcacca cccccaggag tgggtgtgtg gtgtcagtga tgtacactgt 840
 ggtcaccccc atgctgaacc ctttcatcta ctgcctgaga aacagggaca ttcaaagcgc 900
 cctgtggagg ctgcgcagca gaacagtcga atctcatgat ctgttccatc ctttttcttg 960
 tgt 963

<210> 497
 <211> 932
 <212> DNA
 <213> Unknown (H38g346 nucleotide)

<220>
 <223> Synthetic construct

<400> 497
 gaaaagaatc tcattcttat gaatgggttt atgaacttca ctgattaccc agagttggaa 60
 atgcccttgt tcttagtggt tctcagttgc ttcttgccca ttattttgag aaatatggaa 120
 tgggtcatte tgacccaagt gaatgtgcat ctcttcaccc tatatacttc ttcctaacia 180
 atgtcaccct ttgggatacc tcagtcacat tgcctcagat cctggccatt ctggccacag 240
 gcaagacaac catttcttat ggccgctaata aaaagcaatg aggtcctttt tcttcatttg 300
 tgtaggaaact tagtggtttc tgccaacagc aatgaccata agcagcccac tgccccacac 360
 tacaagccat gaacttcaag acatgttggg gttttttttt ggtggggatt tgttgttgta 420
 catgctgggt tttgatgtg aacgtggtga atgcctacac ctgaggacta tcaggagcca 480
 ctttcaacac catctgcaca tttgcccgtc tcttctgtga tgacaattag atcaaattct 540
 gtcacatcct gcccctgctg aagctcattt gaaatacttc aggaacacagc aagataatta 600
 ttgtgatctt tgacagcttt tatgattata gctggcacta gggctatcct gatctcttac 660
 ctgctaataca tcagggtttt gaggatgaaa tcacgagtg gcaaagccaa taattttatc 720
 catccacttg tgccctccac ctaactgcta tgaccttctt ttgggatccc catcttcaga 780
 catgtgaagt acctcagata aatcactgac agaagacaag ttggcatcat gacttgcacc 840
 atctttatct ctatgctaga acttttgatc caaagtctaa agaaggatat acaagttgcc 900
 ttcaaaaagg ccataggtta cttctgggtt tt 932

<210> 498
 <211> 1005
 <212> DNA
 <213> Unknown (H38g347 nucleotide)

<220>
 <223> Synthetic construct

<400> 498
 tctacagacc cacagaatct aacagatgtc tctatatctc tccctccgaga acctcagagg 60
 atccagaatg gcagctgggt cttgctgggt tgttctctgt catgtgcctg gtaacgggtgc 120
 tggggaacct gctcatcacc ctggccgtca gccctgactc ccacctccac acccccatgt 180
 acttcttctc ctccaacctg tccctggcctg acatcggttt cacctccacc acggtagcca 240
 agatgattgt ggacatccaa tctcacagca gagtcattct ctatgcaggc tgcttgactc 300
 agatgtctcc ctttgccatt tttggagtca tggagagag acacgtcctc gagtgtgatg 360
 gcctctgacc gctttgtagc catctgtcac cctctatatc attcagccat catgaacccg 420
 tgtttctgtg gctttctagt tttgttgtct tttttttttt tttctgtctt ttagatgccc 480
 agctgcacaa cttgattgcc ttacaaatga cctgcttcaa ggatgtggaa attcctaatt 540
 tcttctgtga cccttctcaa ctcccccatc ttgcatgttg tgacacctc accaataaca 600
 taatcatgta tttccctgct gccatatttg gttttcttcc catctcgggt tcccttttct 660
 cttactataa aattgtttcc tccattctga gggtttctc atcaggtggg aagtattagg 720
 ccttctctc ctgttggtct cacctgtcag ttgtttgtct attttatgga acaggcgttg 780
 gaggtacctc agttgagatg tgtcatcttc cccgaggaag gttgcagtgg cctcagtgat 840
 gtacatgggtg gtcaccctta tgcctgaacc ctttgtctac agcctgagaa acagggatat 900
 taaaagtgtc ctgcgggtgg cgcacggcag caggtctaa tctcaatata ttcttatctg 960
 ttccattcct tttgtagtgt aggttaaaaa ggcagcaagg tcaaa 1005

<210> 499

<211> 975

<212> DNA

<213> Unknown (H38g348 nucleotide)

<220>

<223> Synthetic construct

<400> 499
 atgaagactt ttagttcctt tcttcagatc ggcagaaata tgcatacaagg aaaccaaacc 60
 accatcactg aattcattct cctgggattt ttcaagcagg atgagcatca aaacctctc 120
 tttgtgcttt tcttggtgat gtacctgggt actgtgattg ggaacgggct catcattgtg 180
 gctatcagct tggatacgta ccttcatacc cccatgtatc tcttccttgc caatctatcc 240
 tttgctgata tttccctccat ttccaactca gtcccaaaa tgctgggtgaa tattcaaacc 300
 aagagtcaat ccatctctta tgagagctgc atcacacaga tgtacttttc tattgtgttt 360
 gtcgtcattg acaatttgct cttggggacc atggcctatg accactttgt ggcgatctgc 420
 caccctctga attatacaat tctcatgctg cccaggttcg gcattttgct cacagtcata 480
 tcatgggtcc tcagtaatat tattgtctctg acacacaccc ttctgtctcat ccaattgtctc 540
 ttctgtaacc acaacactct cccacacttc ttctgtgact tggccctctc gctcaaactg 600
 tctgttctag atacattgat caatgagctt gtgtgtttta ttgtgggttt atcagttatc 660
 atcttccctt ttacactcag cttcttttcc tatgtctgca tcatcagagc tgtcctgaga 720
 gtatcttcca cacagggaaa gtggaaagcc ttctccactt gtggctctca cctgacagtt 780
 gtattactgt tctacggaac cattgtaggc gtgtactttt tccctctctc cactcaccct 840
 gaggacactg ataagattgg tgcctgctta ttcactgtgg tgacacccat gataaacccc 900
 ttcactctaca gcttgaggaa taaggatatg aaaggtgccc tgagaaagct catcaataga 960
 aaaatttctt ccttt 975

<210> 500

<211> 768

<212> DNA

<213> Unknown (H38g349 nucleotide)

<220>

<223> Synthetic construct

<400> 500
 atgtactttt tctcagtc tctatccttt ttggatactt gttattccaa tgtattttaca 60
 cccaaactgt tagagatttt ggttgtggaa gacagaacta tctccttcaa aggatgcatg 120
 gtacaatttt tcttttggtt tgcatattgta atcacagaaa tgttcatgtt agcgggtgatg 180
 gcttatgact tgtttatggc tgtttgtaac cccctgctct acacagtggc tatgtctcct 240
 aagctctgtg ctctcctggt agctggaact tacacatggg gtggactctg ttccctgaca 300

ctcacttatt	ctcttttggg	gttatcctac	tgtggatcta	acatcataaa	tcactttggc	360
tgtgagtact	ctgccattct	ttctctatcc	tgtctctgac	cctacttcaa	ccagatggcg	420
tgttttagtca	tttctatatt	cagtgaagct	tgtagcctcc	tgcccatcct	tgcttcttat	480
gtcttcatag	ttgccactgt	catcaagatg	ctttctacgg	gtggaccca	aaaggccatc	540
tccacctgtg	cctcccacct	gaccaccgtc	tccattttcc	atggggtcac	cctgctcctt	600
tactgtgtgc	ccaactccaa	aagctcatgg	ctcctgggtca	aagtgggtac	tgtacttttt	660
acagtcataa	tccctatgct	gaatcccttg	atctacagcc	ttaggaacaa	agatgtaaaa	720
gggaccgtca	ggaagttgat	aaactcccaa	tcaccttttc	actcaaaa		768

<210> 501

<211> 951

<212> DNA

<213> Unknown (H38g350 nucleotide)

<220>

<223> Synthetic construct

<400> 501

atggcagaga	gtggcaccac	ggtgacagaa	ttttttctga	gggggttccg	gttgaaggca	60
gagctgcaga	taggtctctt	ctttgtgttt	ctggtcattt	ttctcatcac	catggggggc	120
aacctgggca	tgattgtgct	aatttaattc	agactgacct	tcggctccag	actcccatgt	180
acttcttct	cagtcattct	tccttccctg	acatttgcta	ctcttctgtt	attgggtctc	240
agttgcttga	gactttggga	ctgataagat	gatcatcacc	tatgagcgct	gtgccagcca	300
attcttcttt	ttcacactct	gtgctagcat	tgagtgtttc	cttttggctg	tgatggctta	360
tgaccggtac	gtggctgtgt	gtaacccctt	cctctatgcc	atagtcatga	caccaaagac	420
cgcctggcg	ctgctggccg	gggcatattc	tggtgccata	gtcaattctg	tgatctgcac	480
tggtgcacc	ttctctatct	ccttctctaa	gtccaaccat	gtagacttct	tttctgtga	540
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cctctcagct	tttctgggtc	tcacaaccag	catttcagtg	attcttacat	cgtacttggt	660
catcattcag	tctgttctga	agattcgtac	agcaggtgga	aagccaagac	cttctccacc	720
tgtgttctc	acatgactgc	attgactctc	ttctttggaa	cactcatatt	catatacctg	780
aaaggcaaca	tgggcgaatc	ccttgaggaa	gacaagatcg	tgtcaatatt	ttacactgtg	840
gtcatcccca	tgctaaatcc	aatgatctac	agcctgagaa	acaaagacat	gaaagaggct	900
ctgaagaaag	ttttcaacag	gataagggtt	tcccaagcag	agtaactctt	g	951

<210> 502

<211> 939

<212> DNA

<213> Unknown (H38g351 nucleotide)

<220>

<223> Synthetic construct

<400> 502

atgctgctga	cagatagaaa	tacaagtggg	accacgttca	ccctcttggg	cttctcagat	60
taccagaac	tgcaagtccc	actcttctct	gtttttctgg	ccatctacaa	tgctactgtg	120
ctaggggaata	ttgggttgat	tgtgatcatc	aaaatcaacc	ccaaactgca	tacccccatg	180
tactttttcc	tcagccaact	ctcctttgtg	gatttctgct	attcctccat	cattgtctcc	240
aagatgttgg	tgaaccttgt	tgtcaaagac	agaaccattt	catttttagg	atgcgtagta	300
caattctttt	tcttctgtac	ctttgtggtc	actgaatcct	ttttattagc	tgtgatggcc	360
tatgaccgct	tcgtggccat	ttgcaaccct	ctgctctaca	cagttgacat	gtcccagaaa	420
ctctgcgtgc	tgctgggtgt	gggatcctat	gcctggggag	tctcatgttc	cttgggaactg	480
acgtgctctg	ctttaaagtt	atgttttcat	ggtttcaaca	caatcaatca	cttcttctgt	540
gagttctcct	cactactctc	cctttcttgc	tctgatactt	acatcaacca	gtggctgcta	600
ttctttcttg	ccacctttta	tgaatcagc	acactactca	tcgttctcac	atcttatgcg	660
ttcattgttg	taaccatcct	caagatgcgt	tcagtcagtg	ggcgccgcaa	agccttctcc	720
acctgtgect	cccacctgac	tgccatcacc	atcttccatg	gcaccatcct	cttcttttac	780
tgtgtgccca	actccaaaaa	ctccaggcac	acagtcaaag	tggcctctgt	gttttacacc	840
gtgggtgatcc	ccatgttgaa	tcccctgac	tacagtctga	gaaataaaga	tgtcaaggat	900
acagtcaccg	agatactgga	caccaaagtc	ttctcttac			939

<210> 503
 <211> 932
 <212> DNA
 <213> Unknown (H38g352 nucleotide)

<220>
 <223> Synthetic construct

<400> 503
 atggctgaaa ggaattacac cgtagtgcag gagttcttcc ttactgcatt tactgaacat 60
 ctccagtggg gggttcctct ctctctcata tttttgagtt tctatcttgc cactatgtta 120
 gggaacacag gcatgaccc cctgatccgt ggcatcgct ggctccacac cccgatgtac 180
 ttcttctctca gccacctttc cttgggtggac atctgctact cgtccgccat catccctcag 240
 atgctggctg tgctgtggga gcacggcaca accatctccc aggctcgctg tgcagctcag 300
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 accgctacac ggccgtgtgc agcccctgct ttatgtcacc atcataaccg agaaggaccg 420
 ctgggcctag tcaactgggc ttacgttgct ggttttttca gtgcctttgt tcgacggtca 480
 cagccttcac tctctccttt tgtggaaaca atgagatcaa cttcattttc tgtgacctcc 540
 ctctcttatt aaaactctcc tgtggggaca gctacactca ggaagtgggtg attattgtgt 600
 ttgtctctttt cgtcatgcct ccctgtatct tgggtatctt ggtatcctac ctgtttatca 660
 ttgtggccat cctgcagatc cactctgctg gagggccggc caagaccttc tccacctgcg 720
 cctccacact cactgccgtc gctcttttct ttggcaccct catcttcattg tacctgcgag 780
 acaacacagg ccagtcctcc gagggagacc gagtgggtgtc tgtgctctac acggtgggtga 840
 cccaatgct gaatccccct atctatagcc tgagaaacaa ggaggtaaaa gagggcacta 900
 ggaaagccct gagcaaatca aagcctgcta ga 932

<210> 504
 <211> 762
 <212> DNA
 <213> Unknown (H38g353 nucleotide)

<220>
 <223> Synthetic construct

<400> 504
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 gtcaccatgc tgagtatatt ctgggttcaat gtgagggaaa tcagctttaa tgcctgcttg 120
 tcccacatgt tctttattaa attcttcaact gtcattggaat cctcagtgtg gttggccatg 180
 gcttttgatc gttttgtggc cgtctctaat ccccttaggt atgccatgat ttttaactgac 240
 tccagaatag ctcaaattgg agtggcaagt gtcacaggg ggctcctaata gctgacacca 300
 atggtagcac ttcttataag actttcctac tgccacagcc aagtactcca ccactcctac 360
 tgctaccacc ctgatgtgat gaagctctca tgcacagaca ccagaatcaa cagtgcagtt 420
 gggctgactg ccatgttctc tactgttggt gtagacttac ttctatcct cctttcttat 480
 gttttgatca ttaggactgt ccttagcggt gcttccccag aagagaggaa ggaaaccttc 540
 agtacatgtg tctccacat tgtggctttt gctatatatt acattccatt gatcagtctg 600
 tccattgttc acagatttgg gaaacaagcc ccagcctatg tacatactat gattgctaac 660
 acctacctgc tgatctcccc ttgatgaac cctgtcatct acagtgtgaa aaccaaacag 720
 atacgtagag ctgtgataaa aattctccat tccaaagaaa ca 762

<210> 505
 <211> 565
 <212> DNA
 <213> Unknown (H38g354 nucleotide)

<220>
 <223> Synthetic construct

<400> 505
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 gcaaatcttg gaatgatagt ttaatacaga atggattacc aacttcacac accaatgtat 180

ttcttctca	gtcatctgtc	ttctctgtgat	ctctgctatt	ctactgcaac	tgggccaag	240
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ttcttgggtct	tctgtatctt	tgcagattct	gagtggtctac	tgctgtcagt	gatggccttt	360
gatcggtaca	aggccatcat	caacccccctg	ctctatacag	tcaacatgtc	tagcagagt	420
tgctatctac	tcttgactgg	ggtttatctg	gtgggaatag	cagatgcttt	gatacatatg	480
acactggcct	tccgcctatg	cttctgtggg	tctaattgaga	ttaatcattt	cttctgtgat	540
atccccctct	ctcttattac	tctct				565

<210> 506

<211> 978

<212> DNA

<213> Unknown (H38g355 nucleotide)

<220>

<223> Synthetic construct

<400> 506

ctcaatttca	ttatcttctt	caggtgaacc	agctatatattg	agcctatggc	caaaagaaat	60
ctcagcactg	tgacagagtt	cattcttcta	gtcttcacag	atcacccctga	actggcagtt	120
ccactcttcc	tagtggttct	cagtttctat	cttgctactt	ttctggggaa	tggggggatg	180
atcattctaa	tccaagtgga	tgcccaactc	cacacccccg	tgtacttctt	cctgagccac	240
cttgctttcc	tggatgcctg	ctgtgcctca	gtaatcacc	ctcagattct	ggccacactg	300
gccacagaca	agacagttat	ctcctatggc	tgccgtgctg	tgcagttctc	tttcttcacc	360
atatgtgcag	gcacagagt	ttacctgctg	tcagtgatgg	cctatgaccg	ctttgttgcc	420
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gccagtgcct	tcactctgtg	ggtgtcaggg	gccattctgc	ataccacgtg	caccttcacc	540
ctctccttct	gttggtgacaa	tcagatcaac	ttcttcttct	gtgacctccc	acctctgctg	600
aagctcgcct	gcagcagcat	gacacaaact	gagattgtca	ttctcctttg	tgcaaaatgc	660
atgttcctag	ccaatgtcat	ggttatcctg	atctgctaca	tgctcattat	cagagccatt	720
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accactgttg	tcctcttctt	tgggacactt	gccttcatgt	accagagaag	taactccgcc	840
aaatcctcag	aggaagacaa	gatagtgtct	gtcttttaca	ctgtaatcat	ccctatgttg	900
aaccttctga	tctacagtct	gaggaacaaa	gatgtaaaag	ctgcatttgg	aaaactcggt	960
ggtaaattcc	aatttcca					978

<210> 507

<211> 983

<212> DNA

<213> Unknown (H38g356 nucleotide)

<220>

<223> Synthetic construct

<400> 507

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tacactgtgg	ccctccctgg	gaactgcctg	atcctcctgg	ctgtgaagag	gaaccccagc	180
ctgcaccagc	ccatgtgcta	cttctgtgcc	atgtgggcgc	tccccaaagc	gggcctcacc	240
ttgtccacac	tgcccatcac	cttggtctgtg	ctctgggttg	accaccggct	catgggcttc	300
aatgcctgcc	tggccagat	gttcttctctg	cactcctctg	tgggtggagtc	ctcagtgtc	360
ctggccatat	cctttgacca	ctttgtggcc	atctccaacc	ccctgcacta	tgcagctgtc	420
ctcacaaata	gtgtcatcat	caggattggg	ctggccattg	tggctcaagt	taccttgtgc	480
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cccactcggt	ctgtttccac	cctgatgtaa	tgagggcgggc	ctgtgcggac	atcacgatca	600
atatatgcta	tggggtctac	gtgggtgttt	ctacaggggg	cttagactcg	ctgctcatct	660
ttctgtccta	taccttcac	ctgcacacag	tcattgggtct	ggctgctccc	agggagcgca	720
tctgggccc	caacacctgc	gtttccca	ttccggctgt	ctttgtcttc	tttattccag	780
gtatcacctg	gtccatgatc	caccattttg	ggaggcacct	gccccacatt	gtacatgtc	840
ttgttaccta	tgtgtacctg	gtgatgcctt	ctgtgtctcca	ccccatcatt	tacagtatga	900
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gaaattacaa	aattattatg	ggt				983

<210> 508
 <211> 933
 <212> DNA
 <213> Unknown (H38g357 nucleotide)

<220>
 <223> Synthetic construct

<400> 508
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 gccaacctgg gcatgattgc actgattcag gtcagctctc ggctccacac ccccatgtac 180
 tttttcctca gccacttgct ctctgtagat ttctgctact cctcaataat tgtgccaaaa 240
 atgttggcta atatctttaa caaggacaaa gccatctcct tcctaggggtg catgggtgcaa 300
 ttctacttgt tttgcacttg tgtggctcact gaggtcttcc tgcctggcctg gatggcctat 360
 gaccgctttg tggccatctg taaccctttg ctatacacag tcaccatgtc ttggaagggtg 420
 cgtgtggagc tggcttcttg ctgctacttc tgtgggacgg tgtgttctct gattcatttg 480
 tgcttagctc ttaggatccc ctctctataga tctaagtga ttaaccactt tttctgtgat 540
 ctacctctg tcttaagtct tgcttgctct gatatactg tgaatgagac actgctgttc 600
 ctggtggcca ctttgaatga gagtggtacc atcatgatca tcctcacctc ctacctgcta 660
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 tgtgcttccc acctcacagc tatcactgtc ttccatggaa cagtccttcc catttattgc 780
 aggcccagtt caggcaatag tggagatgct gacaaagtg ccaccgtgtt ctacacagtc 840
 gtgattccta tgctgaactc tgtgatctac agcctgagaa ataaagatgt gaaagaagct 900
 ctcagaaaag tgatgggctc caaaattcac tcc 933

<210> 509
 <211> 621
 <212> DNA
 <213> Unknown (H38g358 nucleotide)

<220>
 <223> Synthetic construct

<400> 509
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 cgcttttttt ttttttctca gtgttttaga cgcccagctg cacaacttga ttgccttaca 120
 aatgacctgc ttccaggatg cggaaattcc taatttcttc tgtgacctt ctcaactccc 180
 ccatactgca tgttgtgaca ccttcaccaa taacataatc atgtatttcc ctgctgtcat 240
 atttggtttt ctcccatct ctgggacctt tttctcttac tataaaattg tttcctccat 300
 tctgagtggt tcatcatcac gtgggcagta taaggccttc tccacctgtg ggtctcacct 360
 gtcagttggt tgctgatttt acggaacggg cgttgaggga tacttcagtt cagatgtgtc 420
 atcttccccg agaaaggctg cagtggcctc agtgatgtac acggtgatca ccccatgctg 480
 aacccttca tctacagcct gagaaacagg catattaaaa gtgtcctgcg gcggccgcac 540
 agcagcaccg tccaatctcc gtgtcttctt aactgttcca ttccttttgt agtgtgggtt 600
 aacaaaggca gcaagggtcaa a 621

<210> 510
 <211> 633
 <212> DNA
 <213> Unknown (H38g359 nucleotide)

<220>
 <223> Synthetic construct

<400> 510
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 gattattttg tgggactgtc aacccttgct ttatgacacc atcacaactc tcaagatgtc 120
 tggcagaagc tgggtgactgc atattgtaga gggtttgaca aatgtaatcc aatgtatata 180
 cttcacctgc tcaactctct tttgtgcctt catctatagg tttcactctc tgtgacctcc 240

attgctgctg	accctgaatt	gggtgatagc	ttoctccagc	agctgctgat	ttttcacttt	300
gctctgtata	tgattctgac	cagactagtt	ttgatccgtg	tctctgactt	gttcacacgc	360
aaggccatct	aaacacctgc	aaatcagggtc	tctaggcaaa	gattccctcaa	ccttttttcta	420
cctttgcctc	atgcagaact	gcagttcggt	tgattgttga	gactacagct	ttgatctatg	480
tgtgcagcag	taggcaagtc	ccttacaggg	gagagggccg	tgaccatggt	ttagactgta	540
gtgaacacca	ggctgaccat	tccaatttta	tagcctgagg	aaaaaaaggc	aaaggaggcc	600
ctgaggaaag	gtcttaataa	agccaagttg	ttc			633

<210> 511

<211> 945

<212> DNA

<213> Unknown (H38g360 nucleotide)

<220>

<223> Synthetic construct

<400> 511

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aaagcccatt	tctgggttgg	cttccccctc	ctttccatgt	atgtagtggc	aatgttttga	120
aactgcacgc	tggtcttcat	cgtaaggacg	gaacgcagcc	tgacgctcc	gatgtacctc	180
tttctctgca	tgcttgacgc	cattgacctg	gccttatcca	catccaccat	gcctaagatc	240
cttgcccttt	tctgggttga	ttcccagagag	attagctttg	aggcctgtct	taccagatg	300
ttctttatct	atgccctctc	agccattgaa	tccaccatcc	tgctggccat	ggcctttgac	360
cgttatgtgg	ccatctgcca	cccactgcgc	catgctgcag	tgctcaacaa	tacagtaaca	420
gccagattg	gcacgtggc	tgtggtcgcg	ggatccctct	tttttttccc	actgcctctg	480
ctgatcaagc	ggctggcctt	ctgccactcc	aatgtcctct	cgcactccta	ttgtgtccac	540
caggatgtaa	tgaagttggc	ctatgcagac	actttgcccc	atgtggtata	tggtcttact	600
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gtgtcacaca	ttggtgtggg	actgccttcc	tatgtgccac	ttattggcct	ctcagtggta	780
caccgctttg	gaaacagcct	tcattccatt	gtgcgtgttg	tcattgggtga	catctacctg	840
ctgctgcctc	ctgtcatcaa	tcccatcatc	tatggtgcca	aaaccaaaca	gatcagaaca	900
cgggtgctgg	ctatgttcaa	gatcagctgt	gacaaggact	tgacg		945

<210> 512

<211> 834

<212> DNA

<213> Unknown (H38g361 nucleotide)

<220>

<223> Synthetic construct

<400> 512

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cgactgcatg	agcccatgta	cctcttccctg	gccatgcttt	ccactattga	cctagtccctc	120
tcctctatca	ccatgcccac	gatggccagt	cttttccctga	tgggcatcca	ggagatcgag	180
ttcaacattt	gcctggccca	gatgttccct	atccatgtct	tgacagccgt	ggagtcagct	240
gtcctgctgg	ccatggcctt	tgaccgcttt	gtggccattt	gccacccatt	gcgccatgct	300
tctgtgctga	caggggtgtac	tgtggccaag	attggactat	ctgccctgac	caggggggttt	360
gtattcttct	tcccactgcc	cttcactctc	aagtgggtgt	cctactgcca	aacacatact	420
gtcacacact	ccttctgtct	gcaccaagat	attatgaagc	tgtcctgtac	tgacaccagg	480
gtcaatgtgg	tttatggact	cttcactcatc	ctctcagtc	tggtgtgga	ctctctcttc	540
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gcactcaagg	ctttcaacac	ctgcactctc	cacctctgtg	ctgttctggg	cttctatgta	660
cccctcattg	ggctctcggt	ggtgcatagg	ctgggtgggtc	ccacctccct	cctccatgtg	720
gttatggcta	atacctactt	gctgtacca	cctgtagtca	accccttgt	ctatggagcc	780
aagaccaaag	agatctgttc	aagggtcctc	tgtatgttct	cacaagggtg	caag	834

<210> 513

<211> 957

<212> DNA

<213> Unknown (H38g362 nucleotide)

<220>

<223> Synthetic construct

<400> 513

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atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120
acagccctgt	taggaaacac	cctcatcgtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgttctg	gctgctgtgg	acattgttat	ggcctcctcc	240
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ctctacagtc	tgattggttc	ctctcttatg	gtgggctctg	atgtggcctt	cattgctgcc	660
tcctatatct	taattctcag	ggcagtatct	gatctctcct	caaagactgc	tcagttgaaa	720
gcattaagca	catgtggctc	ccatgtgggg	gttatggctt	tgtactatct	acctgggatg	780
gcatccatct	atgcgccctg	gttggggcag	gatatagtgc	ccttgccacac	ccaagtgtcg	840
ctagctgacc	tgtacgtgat	catcccagcc	actttaaatc	ccatcatcta	tggcatgagg	900
accaaacaat	tgctggaggg	aatatggagt	tatctgatgc	acttcctctt	tgaccac	957

<210> 514

<211> 966

<212> DNA

<213> Unknown (H38g363 nucleotide)

<220>

<223> Synthetic construct

<400> 514

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agggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcatcatcct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atztatagac	gtatgtgttg	cctcttctgc	taccctaaa	240
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attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgtgc	tcgtcctcat	ttcttggttt	gtgggcttca	tccataccac	cagccagttg	480
gcattcacgt	taatctgcc	ttttgtggtc	ctaataaggt	agatagtttt	tttctgtgac	540
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gcagatagtg	gctttctttc	tctgagttcc	tttctcctct	tggttgtctc	ctacactgta	660
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actgctcaca	tcactgtggt	cactttattc	tttggatcgt	gtattttcat	ctatgtgtgg	780
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ctgaagagtc	ggtatcagaa	gcttggtcag	gtttctgtag	tcataagaaa	cgttcttttc	960
ctagaa						966

<210> 515

<211> 966

<212> DNA

<213> Unknown (H38g364 nucleotide)

<220>

<223> Synthetic construct

<400> 515

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atcccaggac	tgcaatcttc	acatcttttg	ctggctatct	cactgagtgc	catgtacatc	120

atagccctgt	taggaaacac	catcatcggtg	actgcaatct	ggatggattc	cactcggcat	180
gagcccatgt	attgctttct	gtgtgtttctg	gctgctgtgg	acattgttat	ggcctcctcg	240
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tgtttcactc	agatgttttt	tgccactta	gccacagctg	tgagagcggg	gctgctgtcg	360
accatggctt	ttgaccgcta	tgtagccatc	tgcaagcctc	tacactacaa	gagaattctc	420
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gcattccatc	atgcggcctg	gttggggcag	gatgtatgac	ccttgccacac	ccaagtcccg	840
ctagctgacc	tgtacgtgat	catcccagcc	acctaaatc	ccatcatcta	tggcatgagg	900
accaaacac	tgcgggagag	aatatggagt	tatctgatgc	atgtcctctt	tgaccattcc	960
aacctg						966

<210> 516

<211> 942

<212> DNA

<213> Unknown (H38g365 nucleotide)

<220>

<223> Synthetic construct

<400> 516

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cctgaactcc	agatattctt	ttctgtgggtg	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttgct	cactgtccta	tccacctcac	accttcactc	tcgcatgtac	180
ttcctgtctc	gcaacatgtc	tcattgacat	gtgcctgtcc	tcctttgcca	caccaaagat	240
gattatggac	ttttttgtctc	tgcgtgaagac	catctctttt	gaaggetgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ttgatctcca	tgtcttttga	360
caggatatatt	gccatatgta	aacctctcca	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgtttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
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ccttccacaa	acttctctgg	agacaaaatt	ctctccgttt	tctataccat	cttccactcc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgtct	cg		942

<210> 517

<211> 952

<212> DNA

<213> Unknown (H38g366 nucleotide)

<220>

<223> Synthetic construct

<400> 517

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gtggtgggga	atgtgaccat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaaacttc	tgggaatctt	ctgggttcgg	gcttgtgaca	ttggcctgga	cgctgtcttg	300
ggccaaatgt	tccttatcca	ctgcttttgc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	gctacgtggc	ccatctgcaa	cccactacgt	catagcatgg	tgctcactta	420
tacagtgggt	ggtcgtttgg	ggcttgtttc	tctcctccgg	ggtgttctct	acattggacc	480
tctgctcttg	atgatccgcc	tgcggctgcc	cctttataaa	acccatgtta	tctccactc	540
ctactgtgag	cacatggctg	tagttgcctt	gacatgtggc	gacagcaggg	tcaataatgt	600

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cctggggaca	tgcgcttctc	acctctgtgc	catcctgac	ttttatgttc	ccattgctgt	780
ttcttccctg	attcaccgat	ttggtcagt	tgtgcctcct	ccagtccaca	ctctgctggc	840
caacttctat	ctcctcattc	ctccaatcct	caatcccatt	gtctatgctg	ttcgcaccaa	900
gcagatccga	gagagccttc	tccaaatacc	aaggatagaa	atgaagatta	ga	952

<210> 518

<211> 301

<212> DNA

<213> Unknown (H38g367 nucleotide)

<220>

<223> Synthetic construct

<400> 518

cagatgctga	cagattggtg	gggaccta	aggaccacaa	gttacgtgaa	ctcaccattc	60
aattccttgt	ctctctgtag	ttatgtgcca	ctatataatt	tctacaatta	ttttataatt	120
atatgccatc	ctttgtaata	tttggttaatc	atgaacctat	atctcctcct	taatcttact	180
ttaataacttg	agggataatt	cattcatttt	tggcatcatg	tatactctca	tcctaaaaat	240
tcgaaggatg	aaaaaaaaa	accttcagat	aattcccctc	attggttgct	gccttgctga	300
a						301

<210> 519

<211> 506

<212> DNA

<213> Unknown (H38g368 nucleotide)

<220>

<223> Synthetic construct

<400> 519

aatagttagt	ccaagcattt	cttactctta	aaattgtgtt	caatgtttgc	agtcactttc	60
ctatccctga	tattatcagg	aaagggcctg	caatttcctt	tctacttctc	tgagtcaact	120
gcaaagtctc	agatgttttc	acagttgaga	caagagaaca	agaagcacca	atgaaaacca	180
cggggttcta	tggaggcatc	atggtgtggt	gagtagaagc	atgctactct	agctgtatct	240
cactgggttc	aaatcctgac	tatacggcat	atggtgcatt	aacagcccgc	tgaccacaag	300
aatttctatg	ctggtaaaat	aggtttataa	taatgccagt	caatctaaag	atgctttaag	360
tgaagactat	ttgggtgttt	tcaaggactc	aataatcatt	aactgtgatc	acgatctttc	420
ccttacctac	tttcaataag	taaataattt	acatttatta	aacaaaagaa	atttaattct	480
gcttttctga	aacaacacaa	ttctat				506

<210> 520

<211> 837

<212> DNA

<213> Unknown (H38g369 nucleotide)

<220>

<223> Synthetic construct

<400> 520

ctccctcccc	tgtttttttag	agttttttgta	atttttggttt	gtttcactac	tctttgttaa	60
gctatgcatt	ctctttctaa	ttattcttact	tgttaaattt	ttattaaaaa	caaaaatagc	120
aatgacatat	tttacatatt	tatctaatta	taagctcaaa	gcatgaaata	gtattgactt	180
ccacatacat	atgttttgtgt	acgtgtatat	tatgaataaa	ttagttcatc	tcaaatatga	240
aactttaaca	tctttaccat	ttttttggaa	tagtctagga	ttttagacac	ttcttaattt	300
tgttttacct	tttatgtcac	atattcttca	ttaatagtta	ttaatatgtt	gtatttttcta	360
gctgttcttg	caaaaagtag	ttttatttta	tgtttcaaca	gtctcagcgt	caactgtgac	420
actttctgtg	tttggttttc	ttggttttga	attgtttatc	ttgatgtgca	tcccatgtga	480
cattgttatg	tttctcaaaa	gattatttaa	atgtttatgtg	tttttatgat	cactcgtttt	540
ttgcttcatg	catgcattat	tgccctaaac	attaaaaaat	acttgttttg	atgtgctttt	600

tatctttata	tgtgaaaaat	ctttgctggc	taatatgtct	tttgtcacia	ttgtttcttc	660
cttaattctc	ttaacgaatt	aagagattat	ttcattttct	tctgtcattt	tatgtggtac	720
aatacatctg	aatctgtcct	catttttctt	acatagggtt	ttcattttct	ttttctgctt	780
gaaattgcc	acatatatct	aaatgttgac	ctacttagta	ttatactgac	tttggtta	837

<210> 521

<211> 461

<212> DNA

<213> Unknown (H38g370 nucleotide)

<220>

<223> Synthetic construct

<400> 521

tgcacatgt	gtgtttggct	cttagcttga	gacaggcaaa	tccacataca	ctcacattcc	60
aacaagccaa	agcaagtcac	ccaccccat	gcttctggga	caaggatgta	cattcctcct	120
gggcgtgggg	gtgcgggtac	cgcaagggga	ataaattttt	cctgagctac	gatacactct	180
cccacccaaa	gtcatacacc	catttagata	acaacttttc	ttgagtagtt	cagatatcat	240
caatgatcca	catattgata	aacatgactc	gacactaata	acactgtgag	cattttacac	300
tattttctat	aaactccact	atgtccatt	tattctcaga	aattctctct	atgatatact	360
tcatgggcac	aaagaagaat	gagtgaagc	cacgcaaaaa	ggactgtgaa	agccactaaa	420
aagggctgga	ataaatggga	caaatcatca	tactcttcta	t		461

<210> 522

<211> 554

<212> DNA

<213> Unknown (H38g371 nucleotide)

<220>

<223> Synthetic construct

<400> 522

cctgtcacc	cccgttcccc	ccaccaccct	ctctttcccc	cttacatcta	ccccaaaact	60
ttttccccc	catctttccg	caaaaccttc	tctcctcct	gttcaccacc	gtttttcccc	120
ctccacctac	ccccaacatt	ttttccccc	cgtcttttcc	tcactgtctt	ttttgcaaca	180
ccttctcctg	ctcgccatcc	tctttttccct	ttggcactaa	ccaccctctt	tactcctcca	240
tctaccccaa	aactattttc	cccttctact	cgtccagccc	acactgcagt	ctccgtcgtc	300
gccaccaacc	gcagcgaggc	gagctgtggt	gccgcagcca	cagcctccag	catgcagcgg	360
tggttagccc	ttgtcctggt	cctctaagcc	gggaacggag	cagccccgag	cgcagacacg	420
catgagccta	gaacggcctg	acacccttcc	agcaccattt	atatactgag	gttatgcata	480
tgaggttcct	ggactacatg	ttccaggatt	gggtaagaga	aaacgcagag	gcctactctg	540
attggacttt	gtta					554

<210> 523

<211> 424

<212> DNA

<213> Unknown (H38g372 nucleotide)

<220>

<223> Synthetic construct

<400> 523

tatatagaaa	tggacaacta	ttttctaaca	taactataac	gatattttact	atttttccat	60
tttataatct	ctactcaata	ttttggtatt	aaaaaattca	tcctaacttc	tttggtggct	120
tattgttttt	gatgttcagc	attactaaat	ttttgactta	tggtttgaaa	tggtgctca	180
ttcctgattg	ctgatcctgg	tatcaacatg	cctgatttaa	cccttaacaa	attctattct	240
tacaaaatag	ctgaagttgg	ttggagggtt	atttttacca	tttcttttat	ttgctgtccc	300
ttttgataaa	attattttcc	ttagttaaaa	aatgtattta	aataagtaaa	taatattctgt	360
gctagttggt	actcgggtgga	catttcagag	gtgtgtccat	actttatgta	ttttatcact	420
gttt						424

<210> 524
 <211> 246
 <212> DNA
 <213> Unknown (H38g373 nucleotide)

<220>
 <223> Synthetic construct

<400> 524
 aatgtatttta ggtaatttct tgacttctgc agggactctg atatacacag agcgtacctg 60
 tgtatactgt ccagtttagct cagattctca gttttgggca ttttctaagg gagggcaatg 120
 aacatcctga taggtttaac taaggtttta aaatgtccaa ttttatgtgt gggttttaac 180
 cacacctgca tcctaattac gacctgggct gttatagctt atagggttag gcaatctgga 240
 tatagt 246

<210> 525
 <211> 619
 <212> DNA
 <213> Unknown (H38g374 nucleotide)

<220>
 <223> Synthetic construct

<400> 525
 gaaattatat tgattgggat ttctctcaaa ctaatctagt tgtattcacc attattaaaa 60
 ttaagtgaca ctcaattgga ctaagtagca ataaaaatat gagacttcct agtgattttt 120
 ttttatccca agccatttac tactgatggg cttgatgtg tgtgcttgaa aacaaaacat 180
 atgcaagtgt tagactgggt tgaagatttg ggtggtgaaa gttagctaata tagatgtcag 240
 tgctctatct agaagccaat cttggaaata tgtgataatg cccttttaaa atagctgaaa 300
 agaaattatt ttgtgtttgt tttcacttca ttcttgtttg gttgtatagc atttaagtga 360
 aaggagattt tttatcctta tactagtatt tgcatttacc atcttttaat gatggagaga 420
 aaagttagtt gtcttacttt gatatgtttg gcataggacc tatgacactt ttgatgtttt 480
 tggtcacagt tctgtcacta gaatgctagc aattagatat atgcaatgag taacctactt 540
 taatacaatg gtttgaagta ccacaggcag taactcctaa acaccaaatac acagtgtttt 600
 aatttgtaac atgttaaag 619

<210> 526
 <211> 939
 <212> DNA
 <213> Unknown (H38g375 nucleotide)

<220>
 <223> Synthetic construct

<400> 526
 atgagaaatt tgagtggagg ccatgtcgag gagtttgtct tgggtggggtt ccctaccacg 60
 cctccctcc agctgtcctt ctttgtcctt ttttttgcaa tttaccttct gacattgttg 120
 gagaatgcac ttattgtctt cacaatatgg cttgctccaa gccttcacg tcccatgtac 180
 tttttccttg gccatctctc tttcctggag ctatggtaca tcaatgtcac cattcctcgg 240
 ctcttggcag cttttcttac ccaggatggg agagtctcct acgtagggtg catgacccaa 300
 ctgtacttct ttattgcctt agcctgtact gaatgtgtgc tgttggcagt tatggcctat 360
 gatcgctacc tggccatctg tggacccttc ctttacccta gtctcatgcc ttccagtctg 420
 gccactcgcc ttgctgtctg ctcttggggc agtggtcttct tcagctccat gatgaagctt 480
 ctttttattt cccaattgtc ctactgtgga cccaacatta tcaaccactt tttctgtgat 540
 atttccccac tactcaacct cacctgtctt gacaaggagc aagcagagct agtagacttc 600
 cttctggccc tgggtgatgat tctactcctt ctattggctg tggtttcatc atacactgcc 660
 atcattgcag ccactctgag gatccctacg tccaggggac gccacaaagc cttttccact 720
 tgtgccgctc atctggcagt ggttggtatc tactactcct ccactctctt cacctatgca 780
 cggccccggg ccattgtacac cttcaaccac aacaagatta tctctgtgct ctacactatc 840
 attgtaccat tcttcaacc agccatctac tgcctgagga acaaggaggt gaaggaggcc 900
 ttcaggaaga cagtgatggg cagatgtcac tatcctagg 939

<210> 527
 <211> 965
 <212> DNA
 <213> Unknown (H38g376 nucleotide)

<220>
 <223> Synthetic construct

<400> 527
 cacacagagc cactgaatct cacagggtgtc tgagaattcc tectcctggg actctcagag 60
 gatccagaac tgcagccggt cctcgctttg ctctccctgt ccctgtccat gtatctgggc 120
 acgggtgctga ggaacctgct cagcatcctg gctgtcagct ctgactccca cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcgggttacac ctgggccacg 240
 gttcccaaga tgattgtgga cagcgagtcg catggcagag tcatctctca tgctggctgc 300
 ctgacacaga tgtctttctt ggtccttttt gcatgtatag aagacatgct cctgactgtg 360
 atggcctatg actgctttgt agccatctgt tgccctctgc actaccagct catcgtgaat 420
 cctcacctct gtgtcttctt cgttttggtg tcccttttcc ttagcctggt ggattcccag 480
 ctgcacagtt ggattgtggt acaattcacc atcatcaaga atgtggaaat ctctaatttt 540
 gtctgtgacc cctctcaact tctcaaactt gcctgttctg acagcgtcat caatagcata 600
 ttcataatatt ttgatagtag tatgtttggt tttcttccca ttccagggat ccttttgtct 660
 tactctaaaa ttgtcccctc cgttctaaagg atgtcatcgt cagatgggaa gtataaagcc 720
 ttctccacct gtggctctca cctagcagtt gtttgctgat ttgatggaac aggcattggc 780
 atgtacctga cttcagctgt ggcaccaccc cccaggaatg gtgtcgtgga gtcagggatg 840
 tacgctgtgg tcaccccat gctgaacctt ttcactaca gcctgagaaa caggcacaca 900
 caaagtgcc tgcggaggct gcgcacagaa cagttgaatc tcatgatctc ttgcatcctt 960
 tttct 965

<210> 528
 <211> 557
 <212> DNA
 <213> Unknown (H38g377 nucleotide)

<220>
 <223> Synthetic construct

<400> 528
 ccagtacccc agcatctggt cttcttctctg aaagtgactg gccaccattg acctaaatca 60
 gaaacctatg atttgtccca gatttttctt tttcccttgc tcttcatatc tatcagtgat 120
 actaattcta aactaacctt aacgaactgc atctgtgcc ctctctcatc tctctccct 180
 cactttcagt gcattgactg aggtacacc atgtgaatta ttaccatggc atgctaacag 240
 aattattgct tccaatggta ccatgccata attcatcctt catatggttg ccaataaatt 300
 tttaaaatat ttatttgtat ctgctacttc tcagggttaaa agcttcccag catgttgaag 360
 atggaatgca aacagctctg catgcatgcc ctttgcctat gcagctccta ttgtccatcc 420
 cccactctta cccactcttg ctggataatt cctttttatt cttaagactt catccaagaa 480
 gcaagctctc atatttctt catatacttc tgtcatagcc ctttacatat gttaatcatc 540
 tgttaccttt tctcttg 557

<210> 529
 <211> 1007
 <212> DNA
 <213> Unknown (H38g378 nucleotide)

<220>
 <223> Synthetic construct

<400> 529
 tctagagacc cacagaatct aacagatgtc tctatatcc tectcctaga agctcagagg 60
 atccagaacg gcagccgggc ctcaactgggc tgttcctgtc cagtgccctg gtcattggcg 120
 tgggggaacct gctcatcatc ctggccatca gccctgactc ccacctccac acccccatgt 180
 acttcttctt ctccaacctg tcttgccctg acatcagttt cacctccacc acagtcccca 240

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agatgactgt ggacatccaa tctcacagca gagtcattct ctatgcaggc tgccctgactc 300
agatgtctct ctttgccatt tttggaggca tgggaagacag acatactcct gagtgtgatg 360
gcctatgacc agtttgttagc caaatgtcac cctctatatac attcagccat catgaaccgc 420
tgtttctgtg gctttctact tttgttgtct ttttttttcc cctcagtctt ttagatgccc 480
agctgtacaa tttgattgcc ttacaaatga cctgcttcaa ggatgtggaa attcctaatt 540
tcttctgtga cccttctcaa ctcccccatc ttgcatgttg tgacaccttc aacaataaca 600
taatcctgta tttccctgat gccatatattg gttttcttcc catctcgggg acacttttct 660
cttacgataa aattgtttcc tccattctga gggtttcatc atcaggtggg aagtataaag 720
ccttctccac ctatgggtct cactgtcag atgtttcctg attttatgga acaggcggtg 780
gagggtacct cagttcagat gtgtcatctt ccccgagaaa gactgcagtg gcctcagtga 840
tgtacgcagt ggtcaccccc atgatgaacc ccttcattcta cagtccgaga aacagggata 900
tgaaaagtgt cctgcggcgg ccgcacggca gcacgttcta atctcaatac cttcttatct 960
gttccattcc ttttgccagtg tgggtcgaaa aaggctgcat gatgaaa 1007

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<210> 530

<211> 471

<212> DNA

<213> Unknown (H38g379 nucleotide)

<220>

<223> Synthetic construct

<400> 530

```

tttttaaaaa tgagattaaa ggaattaatg taagatagaa ccataatgga ttattggagg 60
gaaggtaggc acatttaggg gatgttcttg gcctttccgt ttggctgacc tatcccaaaa 120
cttttctctt gggctctctat cagagacatg gcagtaacct ggatggacca taggcacgag 180
tcctgtagcc cattcctccc gaagctgcag cctttttcat cctgccatgt atctgagtta 240
tgcacgtgcc ttgacacctt cactaaatca tatataactt gaatccgggg actcaagggt 300
ttcaaccatc tttgttttct tctccattac tgtcactgtg cttagagcca agtctcctga 360
aatgcgccct ggagccttgc tcaaagatgt caaccaaca tgctgatcag gtagctatct 420
tgtctgaagc tggtagttca tgacaggctc tgacatgtgc tgagcttgct c 471

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<210> 531

<211> 974

<212> DNA

<213> Unknown (H38g380 nucleotide)

<220>

<223> Synthetic construct

<400> 531

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atgaagatca accagacaat cctgaaggaa ttcattcttg ttggcttttc tgtgtaccca 60
catgtacaga catttctttt tgtgggtctt ttttgtctct accttctcac ccttgcagggt 120
aatctgacca tcatgggtct aacttgagtg gacaggctcc tccacacccc tatgtatctc 180
ttccttagtg cactctcctt ctctgagacc tgctatacac tgaccatcgt cccaagatg 240
ctggaagatc tactggccaa ggacagaagc atttcagtca caggttgtag cttacagatg 300
tgcttcttct tgggacttgg tggcacaaac tgtatcattc tcactttgat gggatatgac 360
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ctggcagtta ttaggctgtc ttgtatagac agtaaccaca cagaattcat tataacactg 600
atctcagtgt ctggtttgct gggtagccct ctgctcatca tcctgactga tgtcttcatt 660
atttctactg tcttcaggat ccttccagct gagggaagc agaaggcctt caccacctgt 720
gcctccacc tcaccggtgt tataatccac tttggtttg catctattgt ttatttgaag 780
ccagaagcct caggagatga cacactcata gcagtcctt atactgtcat taccctcttc 840
ctcagcccca tcatattcag cctgaggaat aaggacatga aaaatgctt tagaagaatg 900
atgggaaaca cagttgcctt gaaaaaataa tcttgggttg ttgctgcttg tttgaagaag 960
ggctcaatgt cccc 974

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<210> 532

<211> 939

<212> DNA

<213> Unknown (H38g381 nucleotide)

<220>

<223> Synthetic construct

<400> 532

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ggggagttgc	agctccttct	ctttgccttg	tccctctctc	tgtatctagt	cactctgacc	120
agcaatgtct	tcattatcat	agccatcagg	ctggatagcc	atctgcacac	ccccatgtac	180
ctcttccttt	ccttcctatc	cttctctgag	acctgctaca	ctttgggcat	catccctaga	240
atgctctctg	gcctggctgg	gggggaccag	gctatctcct	atgtgggctg	tgctgcccag	300
atgttctttt	ctgcctcatg	ggcctgtact	aactgcttcc	ttctggctgc	catgggcttt	360
gacagatatg	tggccatctg	tgtccactc	cactatgcca	gccacatgaa	tcctaccctc	420
tgtgcccagc	tggtcattac	ttccttcctg	actggatacc	tctttggact	gggaatgaca	480
ctagttattt	tccacctctc	attctgcagc	tcccatgaaa	tccagcactt	tttttgtgac	540
acgccacctg	tgctgagcct	agcctgtgga	gatacaggcc	cgagtgaagt	gaggatcttt	600
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tgtgcctcgc	accttacagt	ggtcattatt	cattatggct	gtgcttctct	cgtgtacctg	780
aggcccaaag	ccagctactc	tcttgagaga	gatcagctta	ttgccatgac	ctatactgta	840
gtgaccccc	tccttaatcc	cattgtttat	agtctaagga	ctagggctat	acagacagct	900
ctgaggaatg	ctttcagagg	gagattgctg	ggtaaagga			939

<210> 533

<211> 866

<212> DNA

<213> Unknown (H38g382 nucleotide)

<220>

<223> Synthetic construct

<400> 533

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gtgttctttg	ccatcaaact	ggattttctg	ctgcacagct	ccttgtattt	cttcatcagt	120
gtcctctcct	tcctagagat	ctggatatac	accatcacca	tccccaagat	gttcttcaac	180
ctagccagtg	agcagaagac	cacctccctg	gatggttgcc	tattgcagat	gtatttcttt	240
tactccctcg	gcatactga	ggtttgcttg	ctcaccacca	gggctatgga	cagataacctg	300
gccatctgta	atcacctttg	ctacccca	gtcacgacac	cttagctcta	cactcagggtg	360
attctaggtt	gttgcatctg	tggcttcttc	acgctgctcc	ctgagattgc	ttggatatcc	420
acactgccat	tttgtgggtc	aaatcaaata	cacaacattt	tctgtgacct	tgatcctatc	480
ctgaatctag	catgtgtaga	cactggccca	gttgttttaa	tcaaggttgt	ggacattgta	540
catgctgtgg	agatcatcac	agctataatg	cttgtgaact	tggcttacgt	ccaaattatt	600
gcagtgatcc	taagaaactg	ctctgctgat	ggatgccaaa	aggcattttc	tacctatgct	660
ttccaccttg	ctattttctt	aatctttttt	ggaagtgtag	ccctgatgta	cctgctcttc	720
tctgccaagt	actccttttt	ctgggacaca	accatcagcc	taatgtttgc	agtgtgtgta	780
ccgacacaat	catctgtagt	ctgaggaata	aagagataaa	ggaagcaata	aaaaagcaca	840
tgtgccaatc	aatgatatgc	acacat				866

<210> 534

<211> 954

<212> DNA

<213> Unknown (H38g383 nucleotide)

<220>

<223> Synthetic construct

<400> 534

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tgggttaagt	ctgttgctg	ctttgttcca	ctgctcttca	tctatgcttt	cattgttgtt	120
ggaaacctgg	tcatcatcac	agtgttccag	ttgaatactc	acctccacac	tcccatgtat	180

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acttttatca gtgctctttc tttcctggag atttggtata ccacagccac aatcccaaag      240
atgctgtcta gcctgcttag tgagaggagc atttccttca atggttgtct cctgcagatg      300
tatttcttcc attccaccgg catctgtgag gtgtgtctct tgacagttat ggcctttgac      360
cactacctgg ccatatgcag ccctcttcat tatccctcta tcatgacccc caagctatgt      420
acccaactga ctttaagttg ctgtgtttgt ggctttatca cacccttcc tgagattgcc      480
tggatctcta cactgccatt ttgtggttcg aatcaccttg aacatatctt ctgtgacttc      540
ctcccagtgc tgcgtctggc ctgcacagac acacgagcca tcgtcatgat tcaggtagtg      600
gatgtcattc atgcagtggg gattattaca gctgtgatgc tcatcttcat gtcctacgat      660
ggattgtgg ctgtaattct acgtattcat tcagctggag gccgccgcac agcattttcc      720
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ctacgtttct ctgccaccta ctctttgttc tgggatatag ccattgtctc ggcctttgca      840
gttttgtctc ccttcttcaa cccattatc tatagcctga ggaataaaga aataaaagaa      900
gctataaaaa agcacatagg tcaagctaag atattttttt ccgtaagacc aggg          954

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<210> 535

<211> 386

<212> DNA

<213> Unknown (H38g384 nucleotide)

<220>

<223> Synthetic construct

<400> 535

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ctactgaaac tctcctgctc agacacacac ctcaatgagg tcataatcct tagtgagggg      60
gccctggtea tgatcacccc atttctttgc atcctggctt cttatatgca catcacctgc      120
actgtcctga aggtcccatc cacaaaggga aggtggaaag ccttctccac ctgtggttct      180
cacctggctg tggttctcct cttctacagc accatcattg ctgtgtattt taaccctctg      240
tctcccact cagctgagaa agacactatg gctactgtgt tgtatacagt agtgactccc      300
atgctaaacc ctttatctac agcctgagga acaggctact gaaaggggct ctgaaaaaag      360
tagttggcag ggtggtgttt tctgtc          386

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<210> 536

<211> 486

<212> DNA

<213> Unknown (H38g385 nucleotide)

<220>

<223> Synthetic construct

<400> 536

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ctgctcatca tcccagccat tgccactgac acccggtctc ctgtgctcgt gcgctttttc      60
cttgccaacc tggccttcgt ggtcacttgc ttcacctcca ccaccatccc caagatgctg      120
gacgtgcaaa gagatccctt gtgtcatgtc aggatgcaaa gggattcctt atgctgggtg      180
cctgacccag atgctcttct tcatctgtta ggcattccaca gcttctctgt gactgcaatg      240
gccaatgaac actgtgtggc catctgtcac tctctgaact ccatcaggtc tgtgacacca      300
tagctctgtg gcctcctggg ggtggcctcc tggacctcgc cattcaggaa tgccttgacc      360
caccagtggt tactgacccg cctctcactc tgcacctacg agtgggtcag ccatgtcttc      420
tgcaacctca gccagctgct gaagttggcc tgcctcagac ccactctcaa caatgtgacg      480
gtgcaa          486

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<210> 537

<211> 980

<212> DNA

<213> Unknown (H38g386 nucleotide)

<220>

<223> Synthetic construct

<400> 537

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atgttaaccc ctaataatgc ctgctccgtg cctacctctt tccggctcac tggcattcct      60
ggcctggaat ccctgcacat ctggctctcc atcccccttg gctccatgta cctggtagct      120

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gtgctgggga	acataaccat	cctggcagtg	gtaaggatgg	agtacagcct	gcatcagccc	180
atgtacttct	tcctgtgcat	gttggctgtc	attgacttgg	tcctgtcaac	ctctaccatg	240
cccaaactac	tggccatctt	ctggtttggg	gcccacaaca	ttggtgttaa	tgccctgtttg	300
gcccagatgt	tcttcattca	ttgctttggc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	actatgtggc	catctgtgac	ccactgcate	ataccttggt	gctcaccat	420
gctgtgggtg	gtcgtttggg	gctggctgcc	ctcctccggg	gggtaatcta	cattggacct	480
ctgcccctag	tgatttgtct	gaggttgccc	ctttaccaca	cccaaatacat	tgcccatctg	540
tactgtgagc	acatggctgt	ggtcaccttg	gcatgtgggt	tgacacaagg	gtcaacaact	600
tatatggaat	ggggattggc	tttctggtat	taatcctgga	ttcattggcc	atcaactgct	660
cctatgtgat	gattttcagg	gctgtaatgg	gcttgccac	ctctgaagcc	aggcttaaaa	720
ccttagggac	atgtggctct	cacatctgtg	ccactctcgt	cttctacatc	cccatgtctg	780
tttctctct	cacacaccgc	tttggccatc	gtgtgctcc	ccatatccat	atccatatcc	840
atatccatat	ccatatccat	atccttttgg	ccaacattta	cctcctcatc	ccacctatcc	900
tcaacccaat	agtctatgct	gtccgcacaa	agcagatccg	agaggctctt	ctccatatta	960
aggcaaggac	tcaaaccagg					980

<210> 538

<211> 967

<212> DNA

<213> Unknown (H38g387 nucleotide)

<220>

<223> Synthetic construct

<400> 538

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gagttggcga	gttcctcttg	ctcagcatca	ccagtgtactc	agagaagcag	caggccctct	120
tctggctctt	cctgtgtatg	cacttagtca	ctgaggctgg	aaacacaccc	atcatcctgg	180
gcatcggtcc	caacctcgc	ctgcacaccc	ccacgtactt	cttcacccat	ctctcctttg	240
tcaacatctg	cttcacaccc	aacctgatcc	ccaagctcct	ggtaaacat	gtggcaggaa	300
cagggatgat	cacgatctct	tctccccagt	gctgtactca	gatgtacttc	ctcatctcct	360
ttgccaacgt	ggacaccttt	ctgctggcca	tcatggcact	ggaccactat	gtggccatct	420
gcagcgccct	gcggtagtgc	tccatcatca	ccccgggtcc	tgctcaggggc	tggccgtgct	480
agcgtgagca	ggctccagcc	tcatctccct	ggctccacacg	gtcatcatga	gcagactggc	540
cttctgctcc	tccgcccaga	tttcacactt	ctactgtgac	gcctacctgc	tcatgaagat	600
tgccctgctca	catacatgtc	aatcagcatg	tggttctggg	ggccgtgggtc	ctgttctctg	660
ctccctgtgc	gtcatctctg	gtctcctaca	tccgcattgc	tgacagccatc	ctccggattc	720
cctctcctac	aagaaggcgc	aaggcatgtt	ccatatgtag	ctcccacctg	tctctgggtca	780
ccctgttcta	tggaaactgtc	ctggggatct	gcatatgacc	cccagactcc	ttctcagccc	840
aggacaccat	agcaaccatc	atgtacactg	tggtgacctc	tatgctaaac	cccttcatct	900
acagtctgat	gaacaaggag	gtccaggagg	ccgtgagaag	gctcttcagt	aggggctcac	960
actcatc						967

<210> 539

<211> 603

<212> DNA

<213> Unknown (H38g388 nucleotide)

<220>

<223> Synthetic construct

<400> 539

cttcattttt	gtgggataga	tgtgacctca	taccaggctt	gacagatatt	ggcatagcaa	60
cccctacgac	actacataat	gtgggcaacg	cattgtcgca	ttatgctgtc	gcatgggaat	120
tgctttctcc	attogttgag	ccagttggcc	tttgccgtgc	acttaccctt	ctgtgggtccc	180
aatgagttcg	atagttttta	ttgtgacctt	cctagggtaa	tcaaacttgc	ctgtacagat	240
acctacaggc	tagatattat	ggtcattgct	aacagtgggt	tgctcactgt	gtgttctttt	300
gttcttctaa	tcatctcata	cactatcatc	ctaataacca	tccagcatcg	ccctttagat	360
aagtcgtcca	aagctctgtc	cactttgact	gtctacatta	cagtagttct	tttgttcttt	420
ggaccatgtg	tctttattta	tgcttggtcc	ttccccatca	agtcattaga	taaattcctt	480
gctgtatttt	attctgtgat	cacccctctc	ttgaacccaa	ttatatacac	actgagggaac	540

aaagacatga agacggcaat aagacagctg agaaaatggg atgcacattc tagtgtaaag 600
 ttt 603

<210> 540

<211> 935

<212> DNA

<213> Unknown (H38g389 nucleotide)

<220>

<223> Synthetic construct

<400> 540

atgctcaactt	ttcataatgt	ctgctcagta	cccagctcct	tctggctcac	tggcatccca	60
gggctggagt	ccctacacgt	ctggctctcc	atcccccttg	gtcccatgta	cctgggtggct	120
gtgggtggga	atgtgacat	cctggctgtg	gtaaagatag	aacgcagcct	gcaccagccc	180
atgtactttt	tcttgtgcat	gttggctgcc	attgacctgg	ttctgtctac	ttccactata	240
cccaaacttc	tgggaatctt	ctggttcggg	gcttgtgaca	ttggcctgga	cgccctgcttg	300
ggccaaatgt	tccttatcca	ctgctttgcc	actgttgagt	caggcatctt	ccttgccatg	360
gcttttgatc	gtacgtggc	catctgcaac	ccactacgtc	atagcatggg	gctcacttat	420
acagtgggtg	gtcgtttggg	gcttgtttct	ctcctccggg	gtgttctcta	cattggacct	480
ctgectctga	tgatccgcct	gcggctgccc	ctttataaaa	cccatgttat	ctcccactcc	540
tactgtgagc	acatggctgt	agttgccttg	acatgtggcg	acagcaaggt	caataatgtc	600
tatgggatga	gcatcggctt	tctgggtgtg	atcatggaat	cagtggatag	tgatgcatca	660
taggtgagga	gtatcagggc	cgtgatgggg	ttagccaatc	atgaggatag	gattagagac	720
catggggaga	ggcgaatatc	acatatgtgc	catcatgata	ttataggatc	ccagtgatgt	780
atattccatg	agatcaccca	gatggtcagt	gtgtgcatca	tccagtcacc	aatatgatgg	840
ccaggatata	tatcatcagt	catccaagca	tcaagcccag	tgtataggat	gatcgcacca	900
agcagagccg	agagagctat	atccaaagag	caaga			935

<210> 541

<211> 945

<212> DNA

<213> Unknown (H38g390 nucleotide)

<220>

<223> Synthetic construct

<400> 541

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cacagtactg	ctgaccttgt	cctctttctcc	gtgggttatgg	cggtcttcac	agtggccctc	120
tgtgggaatg	tcctctctcat	cttctctcatc	tacatggacc	ctcaccttca	cacccccatg	180
tactttctcc	tcagccagct	ctccctcatg	gacctcatgt	tggtctgtac	caatgtgcca	240
aagatggcag	ccaacttcct	gtctggcagg	aagtccatct	cctttgtggg	ctgtggcata	300
caaattggcc	tctttgtctg	tcttgtggga	tctgaggggc	tcttgtctgg	actcatggct	360
tatgaccgct	atgtggccat	tagccacca	cttcactatc	ccatccctcat	gaatcagagg	420
gtctgtctcc	agattactgg	gagctcctgg	gcctttggga	taatcgatgg	cttgatccag	480
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tttgcttget	gtgtcttcat	gcttctcttc	ccattctcca	tcatcgtggc	ctcctatgct	660
cacattctag	ggactgtgct	gcaaatgcac	tctgtctcagg	cctggaaaaa	ggccctggcc	720
acctgtctct	cccacctgac	agctgtcacc	ctcttctatg	gggcagccat	gttcatctac	780
ctgaggcccta	ggcactaccg	ggccccagc	catgacaagg	tggcctctat	cttctacacg	840
gtccttactc	ccatgctcaa	ccccctcatt	tacagcttga	ggaacagggg	ggtgatgggg	900
gcactgagga	aggggctgga	ccgctgcagg	atcggcagcc	agcac		945

<210> 542

<211> 975

<212> DNA

<213> Unknown (H38g391 nucleotide)

<220>

<223> Synthetic construct

<400> 542

atgggaagat	gggtgaacca	gtctacacaca	gatggcttct	tctcttggg	catcttttcc	60
cacagccaga	ctgaccttgt	cctcttctct	gcagttatgg	tggctctcac	agtggccctc	120
tgtgggaatg	tcctcctcat	cttctctatc	tacctggacg	ctggacttca	cacccccatg	180
tacttcttcc	tcagccagct	ctccctcatg	gacctcatgt	tggctctgtaa	cattgtgcca	240
aagatgcagc	caacttctctg	tctggcagaa	gtccatctcc	tttgtgggct	gtggcataca	300
aattggcttt	tttgtctctc	ttgtgggatc	tgaggggctc	ttgctgggac	tcatggctta	360
tgaccgctac	gtggccgtta	gccacccact	tcactatccc	atcctcatga	atcagagggt	420
ctgtctccag	attactggga	gctcctgggc	ctttgggata	atagatggag	tgattcagat	480
gggtggcagcc	atgggcttac	cttactgtgg	ctcaaggagc	gtggatcact	ttttctgtga	540
gggtacaagct	ttattgaagc	tggcctgtgc	agacacttcc	ctttttgaca	ccctcctctt	600
tgctgtctgt	gtcttcatgc	ttctccttcc	cttctccatc	atcatggcct	cctatgcttg	660
catcctaggg	gctgtgctcc	gaatacgctc	tgctcaggcc	tggaaaaaag	ccctggccac	720
ctgtcctctc	acctaacagc	tgtcacccctc	ttctatgggg	cagccatgtt	catgtacctg	780
aggcctaggg	gctaccgggc	ccctagccat	gacaagggtg	cctctatctt	ctacacagtc	840
cttactccca	tgctgaaccc	cctcatttac	agcttgagga	atggggagggt	gatgggggca	900
ctgaggaagg	ggctggaccg	ctgcaggatt	ggcagccagc	actgaacccc	agagtctggt	960
gcctgctgtg	cccct					975

<210> 543

<211> 942

<212> DNA

<213> Unknown (H38g392 nucleotide)

<220>

<223> Synthetic construct

<400> 543

atgggggatg	tgaatcagtc	gggtggcctca	gacttcatte	tgggtgggct	cttcagtcac	60
tcaggatcac	gccagctcct	cttctccttg	gtggctgtca	tgtttgatcat	aggccttctg	120
ggcaacaccg	ttcttctctt	cttgatccgt	gtggactccc	ggctccacac	acccatgtac	180
ttcctgtctca	gccagctctc	cctgtttgac	attggctgtc	ccatggtcac	catccccaag	240
atggcatcag	actttctgcg	gggagaagggt	gccacctcct	atggagggtg	tgagctcaa	300
atattcttcc	tcacactgat	gggtgtggct	gagggcgctc	tggttggtcct	catgtcttat	360
gaccgttatg	ttgctgtgtg	ccagcccttg	cagtatcctg	tacttatgag	acgccaggta	420
tgtctgtctga	tgatgggctc	ctcctgggtg	gtagggtgtc	tcaacgcctc	catccagacc	480
tccatcaccc	tgcatcttcc	ctactgtgcc	tcccgtattg	tggtatcact	cttctgtgag	540
gtgccagccc	tactgaagct	ctcctgtgca	gatacctgtg	cctacgagat	ggcgctgtcc	600
acctcagggg	tgctgatcct	aatgtcctct	ctttccctca	tcgccacctc	ctacggccac	660
gtgttgccg	ctgttctaag	catgcgctca	gaggaggcca	gacacaaggc	tgccaccacc	720
tgtcctcagg	acatcacggg	agtggggctc	ttttatgggtg	ccgccgtgtt	catgtacatg	780
gtgccttgcg	cctaccacag	tccacagcag	gataacgtgg	tttccctctt	ctatagcctt	840
gtcaccctca	cactcaaccc	ccttatctac	agtctgagga	atccggagggt	gtggatgggt	900
ttgggtcaaag	tgcttagcag	agctggactc	aggcaaagt	gc		942

<210> 544

<211> 350

<212> DNA

<213> Unknown (H38g393 nucleotide)

<220>

<223> Synthetic construct

<400> 544

aatattaagg	gcattgctgg	tgcccatggt	tattgaagtg	ttggatctat	tctttatcat	60
cctatcttat	atctttatcc	cttcaggcag	ttctacaact	ctcctctcag	aggcccgcta	120
caaagcattt	gggacatgtg	tctctcacat	agggtgccatc	ttagccttct	acacaccttc	180
agtcactctc	tcagtcatgc	accgtgtggc	ccgctgtgct	gcgccacacg	tccacattct	240
cctcgccaat	ttctatctgc	tcttccacc	catgggtcaat	cccatcatct	acggcggtta	300

gaccaagcag atccgtgaca gtcttggggag tattccccgag aaaggatgtg

350

<210> 545

<211> 948

<212> DNA

<213> Unknown (H38g394 nucleotide)

<220>

<223> Synthetic construct

<400> 545

atgcctagtc	agaactatag	catcatatct	gaatttaacc	tctttggctt	ctcagccttc	60
ccccagcacc	tcctgcccac	cttgttccctg	ctgtacctcc	tgatgttcct	gttcacattg	120
ctgggcaacc	ttctcatcat	ggccacaatc	tggattgaac	acagactcca	cacacccatg	180
tacctcttct	tgtgcaccct	ctccgtctct	gagattctgt	tcactgttgc	catcacccct	240
cgcattgctg	ctgatctgct	ttccacccat	cattccatca	cctttgtggc	ttgtgccaac	300
cagatgttct	tctccttcat	gtttggcttc	actcactcct	tccttctcct	ggtcattggc	360
tatgatcgct	atgtggccat	ctgccaccca	ctgcgttaca	atgtgctcat	gagccccctg	420
gactgtgccc	atcttgtggc	ctgtacctgg	gctgggtgct	cagtcattggg	gatgatgggtg	480
acaacgatag	ttttccacct	cactttctgt	gggtctaattg	tgatccacca	ttttttctgt	540
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gtcttcattg	tggctgccat	cttgaggatt	ccctctgccg	aaggccggca	caagacattt	720
tctacgtgtg	tatcccacct	cactgtgggtg	gtcacgcact	atagttttgc	ctcctttatc	780
tacctcaagc	ccaagggcct	ccattctatg	tacagtgaag	ccttgatggc	caccacctat	840
actgtcttca	cccccttctt	tagcccaatc	attttcagcc	taaggaacaa	ggagctgaag	900
aatgccataa	ataaaaactt	ttacagaaaa	ttctgtctct	caagttcc		948

<210> 546

<211> 990

<212> DNA

<213> Unknown (H38g395 nucleotide)

<220>

<223> Synthetic construct

<400> 546

atgtgttctt	ttttcttctg	ccaaacaggt	aaacaggcaa	aaatatcaat	gggagaagaa	60
aaaccaacct	ttgtgtccaa	gtttatcttc	ctgggtcttt	cacaggactt	gcagaccag	120
atcctgctat	ttatcctttt	cctcatcatt	tatctgctga	ccgtgcttgg	aaaccagctc	180
atcatcatte	tcattcttct	ggattctcgc	cttcacactc	ccatgtattt	ttttcttaga	240
aatctctcct	ttgcagatct	ctgtttctct	actagcattg	tcctcgaagt	gttgggtcac	300
ttcttggtaa	agaggaaaac	catttctttt	tatgggtgta	tgacacagat	aattgtcttt	360
cttctgggtg	gggtgtacaga	gtgtgcgctg	ctggcagtga	tgctctatga	ccggtatgtg	420
gctgtctgca	agccccgtga	ctactctacc	atcatgacac	aacgggtgtg	tctctggctg	480
tccttcaggt	cctggggccag	tggggcacta	gtgtctttag	tagataccag	ctttactttc	540
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gtaatcctcc	tggccccctgt	ctccctgatt	cttgggtctt	attggaatat	tatctccact	720
gttatccaga	tgcagtctgg	ggaagggaga	ctcaaggctt	tttccacctg	tggtcccat	780
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aagactacca	aagaactgga	taaaatgata	tctgtgttct	atacagcggg	gactccaatg	900
ttgaaccaca	taatttatag	cttgaggaac	aaagatgtca	aaggggctct	caggaaacta	960
gttggggagaa	agtgtcttct	tcataggcag				990

<210> 547

<211> 676

<212> DNA

<213> Unknown (H38g396 nucleotide)

<220>

<223> Synthetic construct

<400> 547

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ggaaaggaaa gagagacacg ggtctggagg ccgagagcgc aagaccgggg ggtgagcacc      60
cggcacgctg cgagggtaac aagctatcag gaatgcgggg tccgtggcgg gggagtgttg      120
tgggcgcggt taggccgagt ccttttagacg ccagctgca caacgtgatt gcctacagaa      180
ggacctgctt caaggatgtg gaaattccga atttcgctgt gacctttctc aattccccgt      240
cttgcagtgt tggcaccttc accaataaca taatcatgta ttccctgct gccatatttg      300
gttttcttcc catctcgggg acccttttct cttacgataa aattgttttc tccattctga      360
gggtttcatc atcaggtggg aagcataagg ccttctccac caggggggtc cacctgtcag      420
ttgtttgctg attttatgga acaggcattg gaggtacct cagttcagat gtgtcatctt      480
ccccgagaaa ggctgcagtg gcctcagtga tgtacacggg ggccatcccc atgctgaacc      540
ccttcattct cagcctgaga aacagggata ttaaaagtgt cctgcggcac cgcacggcag      600
cacggtctca tctcaatatc ttcttatctg ttccattcct tttgtagtgt gggttaaaaa      660
aggcagcaag gtcaaa                                     676

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<210> 548

<211> 992

<212> DNA

<213> Unknown (H38g397 nucleotide)

<220>

<223> Synthetic construct

<400> 548

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atgaaaatct tcaacacccc cagcaactcc agcaccttca ctggcttcat cctcctgggc      60
ttcccttgcc ccagggaggg acagatcctc ctcgttgtgc tcttactgt tgtttacctc      120
ctgacctca tgggcaatgg ttccatcaac tgtgctgtgc actgggtcag agactccatg      180
cccccatgta catcctgctc gccaacttct cttcctgga gatctgttat gtcacctcta      240
cagtccecaa cgtgctggcc aacttcctct ctgacacaag atcatctcgt tctctggctg      300
cttcctccaa ttctactttt ttttctcctt gggctctaca gaatgctttt tctggggagc      360
tatggcattt gacctatacc ttgccatctg ccggcctcta cgctatccaa ccattatgac      420
cagacgtctc tgcaacattc ttgtgggcag ctgctgggta cttggtttct tgtggttctt      480
gattcctatc agtgtcattt ctcaaattgac ctgtggatct aggattattg accacttccc      540
atgtgacca ggtcctctgt tagccctcac ctgtgccaga gccctctac tagagttgac      600
tagctccacc ttaagttctc tacttctatt tattcccttt ctcttcatcg tggggtgcta      660
tgctctggtc ctgagagctg tgttgagggt tccttcagca tctggaagaa gaaaggcttt      720
ctctacctgt ggctcccacc tggtgtagt ttactgttt atggctcaat gatgatcacg      780
tatgtgagcg caacatctgg gcatgaattc ggaatgcaga agactgtgac tctgttctat      840
tctgtggtea ctccccttat taatcctgtc atatacagtc tgaggaacaa ggaaatgaaa      900
catgcaatga ggaactacac tgtaattgtt tattttctag aattcatagg gctacaagag      960
atgtcaaaga tgtattctat ctctttaatt tt                                     992

```

<210> 549

<211> 805

<212> DNA

<213> Unknown (H38g398 nucleotide)

<220>

<223> Synthetic construct

<400> 549

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ttctcaagta tatatgcttg tatatatcag atctctatct caactatcta tctaatactc      60
tatctatatt taaattagta gactggatta tcaattgtta tttgtattat attttacagc      120
ctactcactt tattctagca gttcatttac acttgtgaaa tgaatcaatt taaatagtaa      180
caaaatagga acaatctgac aacttttttag ggatacttct actcaggaat atgtggcagg      240
agaaactgta caatgtgatt gataacaatc ttcattttga aatattgcta gcatggcttc      300
atcacaaatc actctgtcat ggacagtggg cagcacttgg ccatctgcca cccactgcac      360
taccttatcc tcatgactga tgaaaataga gatcgaatgt ttatggggcc gctgacagcc      420
tttccctaca ccgatgccac atctcagaac atgcactatg taaattttct tattatcatt      480
ctcagtattt tgtacatccc tggaccatat acgttgatcc taagagctat gcttcagctg      540

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ctttcagcag	ctagccatca	aatgccttt	tctatccgtg	ggtctcactt	aatagtgggtg	600
tctctgttct	gtgaaacat	atgatgatgt	gtgtgaatct	catatctgac	catttagtat	660
aatgaagat	gacaaatcac	aatatcataa	tgatatccctc	cataaagact	ctagtttttaa	720
actttgtcaa	ttacacctta	ctcaatatga	acttaaaacc	tatcttcagt	ttttttttta	780
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<210> 550

<211> 933

<212> DNA

<213> Unknown (H38g399 nucleotide)

<220>

<223> Synthetic construct

<400> 550

atgaaaatct	tcaacagccc	cagcaactcc	agcaccttca	ctggcttcat	cctcctgggc	60
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ctgacctca	tgggcaatgg	ttccatcatc	tgtgctgtgc	actgggatca	gagactccac	180
gccccatgt	acatcctgct	cgccaacttc	tccttcttgg	agatatgtta	tgtcacctcc	240
acagtcacca	gcctgctggc	caacttcctc	tctgacacca	agatcatctc	gttctctggc	300
tgcttctcc	agttctactt	tttcttctcc	ttgggctcta	cagaatgctt	tttcctggca	360
gttatggcat	ttgatcgata	ccttgccatc	tgtcggcctc	tacgtatcc	aaccattatg	420
accagacgtc	tctgtaccaa	tcttgtggtc	aattgctggg	tacttggttt	catctgggtc	480
ttgattccta	tcgtcaacat	ctcccaaatg	tccttctgtg	gatctaggat	tattgaccac	540
ttcctatgtg	accagctcc	tcttctaact	ctcacttgca	aaaaaggccc	tgtgatagag	600
cttgtctttt	ctgtcttaag	tcctctgcct	gtctttatgc	tctttctctt	cattgtgggg	660
tcctatgctc	tggtcgtgag	agctgtgttg	agggtcctct	cagcagctgg	gagaagaaag	720
gctttctcca	cctgtgggtc	tcacctggct	gtgggtttcac	tgttctacgg	ctcagtactg	780
gtcatgtatg	ggagcccacc	atctaagaat	gaagctggaa	agcagaagac	tgtgactctg	840
ttttattctg	ttgttaccac	actgcttaac	cctgtgatat	atagtcttag	gaacaaagat	900
atgagaaaag	ctctgaagaa	attttgggga	aca			933

<210> 551

<211> 977

<212> DNA

<213> Unknown (H38g400 nucleotide)

<220>

<223> Synthetic construct

<400> 551

acagccctgg	aattcacaaa	caattcagag	acaagcacta	tgacggaatt	tgttctcctt	60
ggctttctctg	gttgcagga	gatgcaaagt	ttcctcttct	ccctgttctt	tgtgatctat	120
gtatttacca	taataggaaa	tgggaccatt	gtctgtgctg	tgagattgga	caaacggctt	180
cataccacca	tgtatatctt	cctaggggaa	tttgctttcc	ttgaaatccg	gtaagttact	240
tccactgtac	ccaacatgct	agtcaacttc	ctctcagaga	caaaaaaccat	ctcttttgtt	300
ggctgtttcc	tccagtctta	cttttttact	tccttgggta	caatagaagc	atacttcttc	360
tgcacatgg	catatgatcg	gtaccttgct	atctgccgcc	cattgcacta	cccaaccatc	420
atgacccac	aactctgcta	catattgatg	tctttttgct	gggtgtttgg	attcctcagt	480
tactctgtct	ccactgtgca	actgtctcaa	ctgcctttct	gtgggcccaa	catcatcaat	540
cactttttgt	gtgacatgga	cccactgatg	gctctgtcct	gtgcctcagc	tcctatcact	600
gagattatct	tctatatact	gagctccctc	attatcatte	tcactcttct	gtacatctgt	660
ggctcctata	tgttttactg	atagctgtat	taaaagtccc	ttcagcagct	ggccagcaga	720
aggccttttc	ccactgtgga	tctcatctga	cagtgggtgtg	tttattcttt	ggggccctac	780
tggcaatgta	tgtgagcccc	acaactgata	accagctgac	aatttagaag	attataactt	840
tgttctatct	tgtgggtgacc	cccttcttaa	acccctgat	ttacagctta	cgaacaaag	900
agatgaaggc	tgcgttgaag	aaagtcctga	ggatagaatg	agaataaagt	catctacatg	960
agaccaagca	aaccatt					977

<210> 552

<211> 945

<212> DNA

<213> Unknown (H38g401 nucleotide)

<220>

<223> Synthetic construct

<400> 552

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atggagagcg gaaaccaatc aacagtgact gaatttatct tcactggatt ccctcagctt      60
caggatggta gtctcctgta cttctttcct ttacttttca tctatacttt tattatcatt      120
gataacttat taatcttctc tgctgtaagg ctggacaccc atctccacaa ccccatgtat      180
aattttatca gtatatcttc ctttctggag atctgggtaca ccacagccac cattcccaag      240
atgctctcca acctcatcag tgaaaagaag gccatctcaa tgactggctg catcttgtag      300
atgtatttct tccactcact tgaaaactca gaggggatct tgctgaccac catggccatt      360
gacagatacg ttgccatctg caaccctctt cgctatcaaa tgatcatgac cccccggctc      420
tgtgtcgaac tctctgcagg ttcttgccctc ttctggtttcc ttatcctgct tcccagagatt      480
gtgatgattt ccacactgcc tttctgtggg cccaacacaa tccatcagat cttctgtgac      540
ttggctccctg tgctaagcct ggcctgtaca gacacgtcca tgattctgat tgaggatgtg      600
attcatgctg tgaccatcat cattaccttc ctaatcattg cctgtccta tgtaagaatt      660
gtcactgtga tattgaggat tccctcttct gaaggagggc aaaaggcttt ttctacctgt      720
gcaggccacc tcatgggtctt cctgatattc tttggcagtg tatcactcat gtacttgctg      780
ttcagcgaca cttatccacc agttttggac acagccattg cactgatgtt tactgtactt      840
gtccatttct tcaatcccat catttatagc ctgagaaaca aggacatgaa caatgcgatt      900
aaaaaactgt tctgtcttca aaaagtgttg aacaagcctg gaggt                      945

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<210> 553

<211> 921

<212> DNA

<213> Unknown (H38g402 nucleotide)

<220>

<223> Synthetic construct

<400> 553

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atgcattttg tgactgagtt tgtcctcctg gggtttccatg gtcaaaggga gatgcagagc      60
tgcttcttct cattcatcct gggtctctat ctcttgacac tgctagggaa tggagctatt      120
gtctgtgcag tgaaattgga caggcggtcc cacacaccca tgtacatcct tctgggaaac      180
tttgcccttc tagagatctg gtacatttcc tccactgtcc caaacatgct agtcaatata      240
ctctctgaga ttaaaacatc ctcttctctc gggtgcttcc tgcaattcta tttctttttt      300
tcactgggta caacagagtg tttcttttta tcagttatgg cttatgatcg gtacctggcc      360
atctgtcgtc cattacacta cccctccatc atgactggga agttctgtat aattctggtc      420
tgtgtatgct gggtagggcg atttctctgc tatccagtc cttatgttct tatctcccaa      480
cttcccttct gtgggcccac catcattgac cacttgggtg gtgacccagg cccattgttt      540
gcactggcct gcactctctg tcttccactc gagcttatct gttacacctt caactcgatg      600
attatctttg ggcccttctc ctccatcttg ggatcttaca ctctgggtcat cagagctgtg      660
ctttgtattc cctctgggtg tggtcgaact aaagctttct ccacatgtgg gtcccaccta      720
atggtggtgt ctctattcta tggaaacctt atggtgatgt atgtgagccc aacatcaggg      780
aaccagcagc gaatgcagaa gatcatcact ctggtatata cagcaatgac tccattctta      840
aatccccctt tctatagtct tcgaaacaaa gacatgaaag atgctctaaa gagagtctcg      900
gggttaacag ttagccaaaa c                                     921

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<210> 554

<211> 768

<212> DNA

<213> Unknown (H38g403 nucleotide)

<220>

<223> Synthetic construct

<400> 554

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atgtataatt ttatcagcat tttctcattt ctggagatct ggtacacaa tgccacaatt      60
cccaagatgc tctccatcct catcagcagg cagaggacca tctccatggt tggctgcctc      120

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ttgcagatgt	acttcttcca	ttcactggga	aattcagagg	ggattttgtt	gaccaccatg	180
gccattgata	ggtacgttgc	catctgtaac	cctctccgct	acccaaccat	catgaccccc	240
gggctctgtg	ttcagctctc	tgtgggtgcc	tgcactcttg	gctttcttgt	gttgctccca	300
gagattgcat	ggatttccac	actgcccttc	tgtggaccca	accaaateca	ccagatcttc	360
tgtgattttg	aaactgtgct	gcgcttgccc	tgtacagaca	cgtccatgat	tctgattgag	420
gatgtgatcc	atgctgtggc	cattgtattc	tctgtcctga	ttattgccct	ttcttatatc	480
agaatcatca	ctgtaatcct	gaggattccc	tctgttgaag	gccgccagaa	ggccttttct	540
acctgtgccg	cccactctag	tgtctttctg	atgttctatg	gcagtgtatc	cctcatgtac	600
ctgcgtttct	ctgccacttt	cccaccgatt	ttggacacag	ctgttgcact	gatgtttgca	660
gttcttgctc	cctttttcaa	ccctatcatc	tatagcttta	gaaataagga	catgaagatt	720
gcaattaaaa	agcttttctg	ccctcagaag	atggttaatt	tatctgta		768

<210> 555

<211> 960

<212> DNA

<213> Unknown (H38g404 nucleotide)

<220>

<223> Synthetic construct

<400> 555

agtctgggaa	gcatgaataa	ctcacagata	tctactgtga	cgcagtttgt	gttggtgggg	60
tttcttggtc	cctggaaaat	tcagatcatc	ttttctcaa	tgattttgtt	ggctacatc	120
ttcactctga	ctgggaatat	ggccatcatc	tgtgcagtga	ggtgggacca	tcgactccat	180
acccctatgt	acgtgctcct	agccaacttc	tccttcctag	agatctggta	tgtgacctgc	240
acagtcacca	acatgctggg	aaattttttc	tccaaaacta	agaccataac	attctctgga	300
tgtttcactc	agttccactt	cttctttttc	ctgggcacaa	ctgaatgctt	cttctcttgt	360
gtcatggctt	atgatcggtg	cctggccatc	tgccaccac	tgcactatcc	ctccattatg	420
actggccagc	tctgtggcat	cttgggtgct	ctttgttggc	tcattgggtt	ccttggacat	480
tcaattttcca	ttttcttcat	ttttcaacta	cctttctgtg	gtcccaacat	cattgatcat	540
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catgtgttcc	attctgtgag	ctctcttttc	atcaacctca	ccatgggtga	catccttggg	660
tcctatacct	tggtgctcag	aactgtgctt	taggttccct	cttcagctgg	atggcaaaag	720
gccatctcta	cctgtgggtc	acacttggtt	gttgtgtctc	tgttctatgg	agccataatg	780
ctgatgtatg	tgagtcccac	acctggcaac	tcagttgcta	tgcataagct	catcacactg	840
atatattctg	tggtaacacc	tgtcttaaac	cccctcatct	acagcctacg	caacaaggac	900
atgaaatatg	ccctccatca	tgtcttctgt	ggaatgagaa	ttatccagag	atcatgaata	960

<210> 556

<211> 957

<212> DNA

<213> Unknown (H38g405 nucleotide)

<220>

<223> Synthetic construct

<400> 556

atggatccag	agaatcagac	aatggtgact	gagttttatt	tctctgattt	tcctcaatct	60
aagaatggca	gcctcttatt	cttcattcct	atgctcttta	tttatatatt	cattcttgtt	120
ggaaatttca	tgattttctt	tgtgtccaa	ccggaccccc	atctccataa	tcctatgtac	180
agttttatca	gtgtcttctc	cttctctggg	atttgggtaca	ccaccgtgac	tatccccaa	240
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gacagggtgt	tagccatctg	caaccccctt	cgctatgcaa	tcactatgtc	cccttgactg	420
tgcattccagc	tctccactgg	ctcttgcatc	tttggcttcc	tcattgttact	gccagagatt	480
gtgtgcattt	ccactcttcc	attctgtggc	gccaaacaaa	ttcatcaact	cttttgtgac	540
tttgaacctg	tgtgtcagtt	agcctgcaca	gatacgtaca	taattctggg	tgaagatgtg	600
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gcagcccaca	ttgctatttt	cttgcgtgtt	tttggcagtg	tgtcactcat	gtatctgcgc	780
ttctctgtca	cattcccacc	attactggac	aaggccattg	cactgatgtt	tgctgtcctt	840

gccctacttt tcaacccagt aatctatagt ctgaggaaca aagatatgaa aaacgccacc 900
aagaaaatcc tctgttctca aaagatgttc aatgcctctg ggagctaata gagttca 957

<210> 557

<211> 951

<212> DNA

<213> Unknown (H38g406 nucleotide)

<220>

<223> Synthetic construct

<400> 557

atgacacagt	tgacggccag	tgggaatcag	acaatggtga	ctgagttcct	cttctctatg	60
ttcccgcagt	cgcacagagg	tggcctctta	ttctttatcc	ccttgcttct	catctacgga	120
tttatcctaa	ctggaaacct	aataatgttc	attgtcatcc	aggtgggcat	ggccctgcac	180
accctttgt	attctttat	cagtgtcctc	tccttcctgg	agatctgcta	taccacaacc	240
accatcccca	agatgctgtc	ctgcctaate	agtgagcaga	agagcatttc	cgtggctggc	300
tgctcctgc	agatgtactt	tttccactca	ccttggtatca	cagaaagctg	tgtcctgaca	360
gcaatggcca	ttgacaggta	catagctatc	tgcaatccac	tccgttacc	aaccatcatg	420
attcccaaac	tttgatcca	gctgacagtt	ggatcctgct	tttggtgctt	cctccttggtg	480
cttcctgaga	ttgcatggat	ttccaccttg	cctttctgtg	gctccaacca	gatccaccag	540
atattctgtg	atttcacacc	tgtgctgagc	ttggcctgca	cagatacatt	cctagtgggtc	600
attgtggatg	ccatccatgc	agcggaaatt	gtagcctcct	tcctgggtcat	tgtctatccc	660
tacatccgga	ttattatagt	gattctggga	atgcactcag	ctgaagggtca	tcacaaggcc	720
ttttccacct	gtgctgctca	ccttgctgtg	ttcttgctat	tttttggcag	tgtggctgtc	780
atgtatttga	gattctcagc	cacctactca	gtgttttggg	acacagcaat	tgtgtcact	840
tttgttatcc	ttgtccctt	tttcaacccc	atcatctata	gcctgaaaaa	caaggacatg	900
aaagaggcta	ttggaaggct	tttccactat	cagaagaggg	ctggttgggc	t	951

<210> 558

<211> 831

<212> DNA

<213> Unknown (H38g407 nucleotide)

<220>

<223> Synthetic construct

<400> 558

atggctctaa	ttggaaacct	atccatgatt	cttctcatct	tcttggacac	ccatctccac	60
acacccatgt	atttcctact	tagtcagctc	tccttcattg	acctaataa	catctccacc	120
attgttcccta	agatggcatc	tgattttctg	tctggtaaca	agtctatctc	cttcactggg	180
tgtgggatcc	agagtttctt	cttctcggca	ttaggagggtg	cagaagcact	acttttggca	240
tctatggcct	atgatcggtta	cattgctatt	tgctttcctc	ttcactatcc	catccgcatg	300
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tgtgtctcaca	ctgtatatgt	actccatatt	ccttattggc	aatccagggc	catcaatcat	420
ttcttctgtg	atgtcccagc	aatgggtgact	ctggcctgca	tggacacctg	ggtctatgag	480
ggcacagtgt	ttttgagcac	caccatcttt	ctcgtgtttc	ccttcattgc	tatttcatgt	540
tcctatggcc	gggttctcct	tgtgtgtctac	cacatgaaat	ctgcagaagg	gaggaagaaa	600
gcctacctga	cctgcagcac	ccacctcact	gtagtaactt	tctactatgc	accttttgtc	660
tacacttata	tacgtccaag	atccctgcga	tctccaacag	aggacaagggt	tctggctgtc	720
ttctacacca	tcctcacccc	aatgctcaac	cccatcatct	atagcctgag	gaacaaggag	780
gtgatggggg	ccctgacacg	agtgagtcag	agaatctgct	ctgtgaaaat	g	831

<210> 559

<211> 725

<212> DNA

<213> Unknown (H38g408 nucleotide)

<220>

<223> Synthetic construct

<400> 559

atggatagag	taaataattc	tgcggtatct	aaatttgat	tgattggact	ttcaagctct	60
tgggagatgc	atctttttct	tttttggttc	ttctctgtgt	tctacatggg	aattatcctg	120
gaaaatctct	tcatttgtgt	cacagtaatt	attgactctc	atttaaattc	cccagggtact	180
gcctactggc	caacatttat	cttcttgatc	tgggtcttct	cctacagttc	tgactttttc	240
actaactgca	gcattcattc	ttttccaaga	tgcatgatac	agataatttt	catttgtgtc	300
atgcgtaaaa	attgagatgg	tgctgtcat	aaccatggca	tagagcaggt	acactgcca	360
tctgtaagcc	tccccattac	ctgaccacaa	tgaaccccaa	aatgtgtgtt	tcctttgttg	420
gaggcatcct	ggatagtcag	gataatccat	gctgtatctc	agtttgtttt	tgccataaac	480
ttgccttttt	gtggccctaa	tagagtaggt	agttttcact	gtgattttcc	ttatgtcatg	540
aaacttgctt	gtgtagatac	ttacaaacta	gaggtttag	tcactgctaa	cagtgggctt	600
atatccatag	ctacctgttt	cttattaata	atatcctata	ttttcatttc	ggtaaccgtc	660
tagaatcctt	cttcaggaga	cttatctaaa	gcatttgtgt	catgttagat	cacatcacag	720
taggg						725

<210> 560

<211> 936

<212> DNA

<213> Unknown (H38g409 nucleotide)

<220>

<223> Synthetic construct

<400> 560

atggacacag	ggaactggag	ccaggtagca	gaattcatca	tcttgggctt	ccccatctc	60
caggggtgtcc	agatttatct	cttcctcttg	ttgcttctca	tttacctcat	gactgtgttg	120
ggaaacctgc	tgatattcct	ggtggctctg	ctggactccc	ggcttcacac	acccatgtac	180
cactttgtca	gcattctctc	cttctcagag	cttggctata	cagctgccac	catccctaag	240
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atctattttct	ttcactccct	tggagcgact	gagtgtctatc	tcctgacagc	tatggcctac	360
gataggatt	tagccatctg	ccggccctc	cactacccaa	ccctcatgac	cccaacactt	420
tgtgcagaga	ttgccattgg	ctggttggtg	ggaggcttgg	ctgggcccag	agttgaaatt	480
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ttccctcctg	tgtgagttt	ggcttgcact	gatacgtcta	caaagtgcct	agtagatttt	600
gttataaatt	cctgcaagat	cctagccacc	ttcctgtctg	tcctctgctc	ctatgtgcag	660
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tgtgcctccc	acctcactgt	ggttctcatc	ttctatggga	gcaccccttc	catgtatgtg	780
cggtgaaga	agagctactc	actggactat	gaccaggccc	tggcagtggt	ctactcagtg	840
ctcacaccct	tcctcaacct	cttcactctac	agcttgacaa	acaaggagat	caaggaggct	900
gtgaggaggc	agctaaagag	aattggggata	ttggca			936

<210> 561

<211> 635

<212> DNA

<213> Unknown (H38g410 nucleotide)

<220>

<223> Synthetic construct

<400> 561

gaattccttt	tttataatta	caatcaaaca	tcaactgatt	tcattcttatt	ggggctgttc	60
ccacaatcaa	gaattggcct	tttcgtattc	accctcattt	ttctcatttt	cctaattggct	120
ctaattggaa	atctatccat	gattcttctc	atcttttttg	acatccatct	ccacacacct	180
atgtatttcc	tacttagtca	gctctccctc	attgacctaa	attacatctc	caccattgtt	240
ccaaagatgg	tttatgattt	tctgtatgga	aacaagtcta	tctccttcac	tggatgtggg	300
attcagagtt	tcttcttctt	gacttttagca	gttgacagaag	ggctgtctct	gacatcaatg	360
gcctatgate	gttatgtggc	catttgcttt	cctctccact	atcccatccg	tataagcaaa	420
agagtgtgtg	tgatgatgat	aacaggatct	tggatgataa	gctctatcaa	ctcttgtgct	480
cacacagtat	atgcactctg	tatcccatat	tgcaagtcca	gagccatcaa	tcattttttc	540
tgtgagggat	cctctgagag	gtacctggga	gcactgaagc	ttggcgctgg	gccgcggtgg	600
aaacggcgtg	actggtaaaa	ccctggggcg	gccca			635

<210> 562
 <211> 789
 <212> DNA
 <213> Unknown (H38g411 nucleotide)

<220>
 <223> Synthetic construct

<400> 562
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 gaccgttatg tggctgtgtg taacctttt aggtacaaca tcattatgaa cagcagcacc 420
 ttcatattgg tgataattgt gtcattgggt ttgggggttc tttctgaaat ctggccagtt 480
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 cgaggacaat tgcctcaagg atcctgtgag gacactcttt tcagagagtt tattcttttt 600
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 atcatctcca ccaacctcaa gattccgtca gcctctggct ggaggaaatc cttttccacc 720
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 aaaccaag 789

<210> 563
 <211> 951
 <212> DNA
 <213> Unknown (H38g412 nucleotide)

<220>
 <223> Synthetic construct

<400> 563
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 ggtaacatgc tcatcttctc agtcatccga ctggatgcag ctctgcacac acctatgtac 180
 cactttgtca gtgttctttc cttcttggag ttgtgggata cagctaccac tatccctaag 240
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 gatagatacc tggccatttg tgggcccctc cactacccta taattatgac caccacactc 420
 tgtgccaaga tggctgtctg ttgttggact tgtggcttcc tgtgtcccat ttctgaggtc 480
 atccttgcct ccagctccc attttgtgt tacaatgaaa tccaacacat tttctgtgac 540
 tttccacctt tgcctgagct ggctgcaag gacacatctg ctaacattct ggtggacttt 600
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 tgtgcctcac atcttgtgtt ggtcctcatc ttcttggga gcatcatctt catgtatgtg 780
 cggctaaaga agagctattc cctgaccctt gaccgaacac ttgctatagt ttactccgta 840
 ctaacaccaa tggctaatcc aattatctac agtcttcgta acaaggaaat cattaaagct 900
 atcaaggaga ccatcttcca gaaggagat aaagctagtc ttgctcatct t 951

<210> 564
 <211> 945
 <212> DNA
 <213> Unknown (H38g413 nucleotide)

<220>
 <223> Synthetic construct

<400> 564
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ctcttcctgt gtgccctctc catcaccgag atcctctaca ccgtggccat catcccgcg 240
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gaccgtacg tggccatctg ccacccctg cgttacaacg tgctcatgag cctgccccggc 420
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gtcctcacac ccttcctcag ccccatcatc ttcagcctca ggaacaagga gctgaaggtc 900
gccatgaaga agacttgctt caccaaactc tttccacaga actgc 945

```

<210> 565

<211> 958

<212> DNA

<213> Unknown (H38g414 nucleotide)

<220>

<223> Synthetic construct

<400> 565

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gatccagaac tgcagcctgt cctcgctggg ctgtcccat ccatgtatct ggtcacagtg 120
ctgaggaaac tgctcgtcat cctggctgtc agctctgact cccacctcca ccccccatg 180
tacttcttcc tctccaaccc gtgctgggct gacatcggtt tcaactcggc cacggttccc 240
aagatgactg tggacatgca gtcacatata agagtcattt cttatgcgag ctgcctgaca 300
cggatgtctt tcttggctct ttttgcatgt atagaagaca tgctcctgac tgtgatggcc 360
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ctctgtgtct tcttagtttt ggtgtccttt ttccttagcc tgttggattc ccagctgcac 480
agttagattg ttacaattca ccttcttcaa gaatgtggaa atctctcatt ttgtctgtga 540
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tttcaatagt actatgtttg gttttcttcc catttcaggg atccttttgt cttactataa 660
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gacttcagct gtggcaccac cccccaggaa tgggtgtggt gcgtcagtga tgtacgctgt 840
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cctgtggagg ctgcgcgaga gaacagtcga atctcatgat ctgttccatc ctttttct 958

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<210> 566

<211> 470

<212> DNA

<213> Unknown (H38g415 nucleotide)

<220>

<223> Synthetic construct

<400> 566

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gtctccccac tgtgggaatg tgtgtcatga cagcgggtct cccacttctt atgctctgga 60
gactcagttt tctgtctggt tcacagtgtg ggctgctgca cactacttct ttcacagagt 120
ttgcggcttc tttcagtttt cctgttaagt tctgtgctg cttcttgga aaaagtccac 180
agcatgaatc tctacacacc attttgtctt tctaagtgg agaatacagt taacaatgcc 240
ttcaacctgc catcatggaa aaaaagtaaa agtgtggtca ccatgttcta agggcccgc 300
atgatcacgt acttgaggtc tgactcctag tataacctac agtgggaaaa cagttggtgc 360
tgttttacag cattgtctct gccttcataa aacccatcat ctccagcctc aggaacaagg 420
atgtaaaagg ggcttcttgg aaagtactta gagtcaaagg gacagctcaa 470

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<210> 567

<211> 862
 <212> DNA
 <213> Unknown (H38g416 nucleotide)

<220>
 <223> Synthetic construct

<400> 567
 atggaaaatt acaatcaaac atcaactgat ttcattcttat tggggctgtt tccaccatca 60
 agaattgacc ttttcttctt cattctctttt gttctcattt tccatgatggc tctaattgga 120
 aacctatcca tgattcttct catcttcttg gacacccatc tccacacacc catgtatttc 180
 ctgcttagtc agctctccct cattgaccta aattacatct ctacgattgt tcctaagatg 240
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 gtgctgatga taacaggatc ttggatgata ggctccatca actcttggtc tcacacagta 480
 tatgcattcc gtatcccata ttgcaagtc agagccatca atcatttttt ctgtgatgtt 540
 ccagctatgt tgacattagc ctgtacagac acctgggtct atgagtacac agtggttttg 600
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 ctctctgtct tctaccgcat gcactctgca gaaggaggaa aaaggcctat tcgacctgca 720
 gcaccacct cactgtagta actttctact atgcaccctt acgttatacc tatctatgtc 780
 caagatccct gtttatttct gacagaggac aaggttgggg gggggggggg acaccatcct 840
 cacctcaatg ctcaaccca tc 862

<210> 568
 <211> 930
 <212> DNA
 <213> Unknown (H38g417 nucleotide)

<220>
 <223> Synthetic construct

<400> 568
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 cctcagatgg agatcatctt ctctcgtggc ttccctcatag ttacctggg taatgtagtg 120
 gggaatattg gtatgattat cctgattaca acagacactc agcttcacac acccatgtat 180
 ttttctctct gcaacctctc ctttggttgac ctgggctact cctcagccat tgccccagg 240
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 tgcttggttc tcatgctggg ctcttacctg gctgggtctag tgagtttagt agccacact 480
 accctcacct tcagcctgag ttactgtggt tccaatatca tcaatcattt cttctgcgaa 540
 atcccaccac tcttgccctt ctcttgetca gacacctaca tcagttagat cttgctcttc 600
 agtctgtgtg gcttcattga attcagcacc atctcatca tcttcactc ctataccttt 660
 atccttggtg caatcatcag aatgcgttca gctgaaggcc gccttaaggc tttctccacc 720
 tgcggtgtct accctactgg catcaccctc ttctatggca cagtcatgtt tatgtacctg 780
 aggccaacat ccagctactc cctggaccaa gacaagtggt cctctgtgtt ctacacggtt 840
 atcatcccca tgttaaatcc cttgatctac agtttgcgga acaaggatgt gaaagctgct 900
 ttcaaaaagc taattggaaa aaaatctcaa 930

<210> 569
 <211> 1005
 <212> DNA
 <213> Unknown (H38g418 nucleotide)

<220>
 <223> Synthetic construct

<400> 569
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 atccagaacg gcagctgggc cttgctgggc tgttctgtc catgtgcctg gtcacggtgc 120

tggggaacct	gctcatcatc	ctggccgcca	gtcctgactc	ccacctccac	acccccatgt	180
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agatgattgt	ggacatccga	tctcacagca	gagtcattctc	ctatgcaggc	tgcttgactc	300
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gcctatgacc	agtttgtagc	catctgtcac	cctctatata	attcagccgt	catgaacct	420
tgtttctgtg	gctttctagt	tttgttgact	tttttttttc	tcagtctttt	agacgcccag	480
ctgcacaact	tgattgcctt	acaaatgacc	tgcttcaagg	atgtggaaat	tcctaatttc	540
ttctgtgacc	cttctccact	cccccatctt	gcatgttggtg	acaccttcac	caataacata	600
atcatgtatt	tccctgctgc	catatttggt	tttcttccca	tctcggggac	ccttttctct	660
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aaaagtgtcc	tgcggtggct	gcacggcagc	tctgtcta	ctcaacatct	tcttatctgt	960
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<210> 570

<211> 907

<212> DNA

<213> Unknown (H38g419 nucleotide)

<220>

<223> Synthetic construct

<400> 570

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gggaccctac	aacctcttgc	cttcttgggg	accctatgca	tctatctcct	cacacttgca	120
gggaacattc	tcattcattgt	cctgggtacag	ttagattctg	gactgttcac	gcccattgtac	180
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ctgctgcaca	ccttgctcca	aggggtgttca	cccgctctcat	cagctgtatg	ctttatttcag	300
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tagctacett	atcatctgcc	accacttcca	ctaccacgca	ctcatgagca	gacaggtaca	420
gttacgacta	gctggggcca	gttgggtggc	tggcttctca	gctgcacttg	tgccagccac	480
cctcactgcc	actctgccct	tctgcttgaa	agagggtggc	cattactttt	gtgacttggc	540
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gattggtgtg	gccactgggt	gcaactttgt	gtcatttttg	ggactctatg	gaggtatcct	660
gaatgctgtg	ctgaagctac	cctcagctgc	cagtagtgcc	aaggccttct	ctacctgttc	720
ctcccacgta	actgtggtgg	cactattcta	tgttcttgcc	ttcacagtat	atgtgggctc	780
acctgggagt	cgacctgaga	gcacagacaa	gcttgttgcc	ttgggttatg	cccttattac	840
ccctttcctc	aatcctatca	tctatagcct	tcgcaacaag	gaggtgaaga	aggctttaag	900
gagagtc						907

<210> 571

<211> 1006

<212> DNA

<213> Unknown (H38g420 nucleotide)

<220>

<223> Synthetic construct

<400> 571

ccaacgaaga	gagagaacca	cacagtgata	agggagtgtg	ttttccaggg	tttctccagg	60
tttcatgaac	acaagcttac	cctctttgtg	gtattttctta	ccttgtgtct	tttaaccttg	120
gctggcaatg	tcataattgt	gacaattatc	agcattgatc	gtcaccttca	cacccccatg	180
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cggatgctct	ccagtctctt	aagtctaagc	caacctatct	ctttgggtgg	ctgtgccacc	300
cagatgtttt	ttttattacc	ttggccatca	acaactgctt	tctgtctaca	gcaatggggg	360
atgatcgcta	tgtggccatc	tgtaacctt	tgaggtagat	gatcatcatg	aacaagaaag	420
tgtgtgtcca	gctggtatgt	gggtcctgca	gtgttgggct	gcttgtggcc	atagttcaga	480
tttcatctgt	gttcaggctg	cctttttgtg	ataaacagg	ggccatttat	ttctgtgata	540
tccaccagtc	tatgaaactt	tctgtgtgtg	ataccactct	acatgacctc	attaattttg	600

ttgttagttc	cctgggttatt	gtgggtgccgc	tggggtttggt	cttcatctcc	tacatccctca	660
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agcccgaagtc	agagaacacc	agggatcagg	accagctaata	ttcagtgaca	tacaccgtct	840
ttactccact	acttaatcct	gttgtgtaca	ctttgaggaa	caaggaggtc	aagaatgccc	900
ttcaccgtgc	tattggcaaa	aaaccttttg	cctagaatct	tcacagttt	gacatatagt	960
cagtcatagt	ctgggtattt	ttttaagctc	gagaaaattg	aatcct		1006

<210> 572

<211> 945

<212> DNA

<213> Unknown (H38g421 nucleotide)

<220>

<223> Synthetic construct

<400> 572

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accctggcct	ggaacctggc	cctcattttt	ctgatcagag	gtgacacca	tctgcacaca	180
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gctcccaata	tgctcactga	cttcttctgg	gagcagaaga	ccatatcatt	tgtgggctgt	300
gctgctcagt	tttttttctt	tgctggcatg	ggtctgtctg	agtgcctcct	cctgactgct	360
atggcatacg	accgatatgc	agccatctcc	agcccccttc	tctacccac	tatcatgacc	420
cagggcctct	gtacacgcat	ggtgggtggg	gcatagtttg	gtggcttcct	gagctccctg	480
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gtgtactttg	gaccacgtc	cagctacttg	ctaggcaggg	acaaggtggt	gtctgttttc	840
tattcattgg	tgatcccat	gctgaaccct	ctcatttaca	gtttgaggaa	caaagagatc	900
aaggatgccc	tgtggaaggt	gttggaaagg	aagaaagtgt	tttct		945

<210> 573

<211> 949

<212> DNA

<213> Unknown (H38g422 nucleotide)

<220>

<223> Synthetic construct

<400> 573

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gggttgctct	ctgaaccaa	gatacagctt	attcttttta	ttatgttctt	gttctattta	120
tcaacgggtg	ctggaaatgt	tataatcatc	actattatct	agatggaacc	tctcctccaa	180
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aatgtccccc	aaatgctgtc	caacatggcg	gggaaaaaga	acaccatctc	attctccagc	300
tgcgctactc	agatgtactt	ctccctctcc	tttggaatga	ttgtgtcctc	cttgggtgtca	360
tggcttatga	cagatatgta	gccatttgct	atcctcttca	ttataccttc	attatggacc	420
aaaacacctg	cattcaactg	gcagttattt	cttggccag	tagcttccctg	agttccatgg	480
ttatcaatgt	tctcacgttg	agtttgccct	actgtgggcc	taatatccctg	aatcactttt	540
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cacgggtggtc	acacccatgc	ttaaccctt	gatttacagc	ctgaggaacc	aagatgtgaa	900
aggagctcga	aggagagcta	ttgcaaagca	gaggatgtga	cagctgtta		949

<210> 574

<211> 1022
 <212> DNA
 <213> Unknown (H38g423 nucleotide)

<220>
 <223> Synthetic construct

<400> 574

atgccaaagc	taaattccac	ttttgtgact	gagttcctct	ttgaagggtt	ctccagcttc	60
aggcggcagc	acaaacttgt	cttctttgtt	gtcttcctaa	ctttgtacct	gctgactctc	120
tctggcaatg	tgattatcat	gaccattatt	cgcttgacc	atcatcttca	cacccccatg	180
tacttcttcc	tgtgcatgct	atccatctct	gagacctgct	acactgtggc	catcattccc	240
catatgcttt	ctggctctct	gaatcctcat	cagcccattg	ccacccaaag	ctgtgccact	300
cagctcttct	tctatctcac	ctttggcatc	aacaactgct	tcctgctcac	agtcatggga	360
tatgaccgct	atgtggccat	ctgcaacccc	ctaagggtatt	cagtcatcat	gggtaagagg	420
gcctgtatcc	aactggcctc	tggatcactg	gggattggcc	ttggcatggc	cattgtccaa	480
gtaacatctg	tgtttggcct	gccattctgt	gatgcctttg	tcctctccca	cttcttctgt	540
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gt						1022

<210> 575
 <211> 938
 <212> DNA
 <213> Unknown (H38g424 nucleotide)

<220>
 <223> Synthetic construct

<400> 575

atggatattg	gcctgagtat	agccaatagc	tcagggtttc	aactgtctga	gttcattctg	60
atagggttcc	caggcattca	tgagtggcag	cactggctct	ccctgccctt	agctcttggg	120
gccaatctcc	tcatacataat	caccattcaa	catgagacca	tgctacatga	acccatgtac	180
catttgctgg	gcataattagc	agtgggtggac	attggcctgg	ccaccaccat	catgcccaaag	240
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atctatgcca	tccactcttt	catgtgcatg	gagtcaggca	tcttcctctg	catggcagtg	360
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gtcatcaaag	ccacactgtc	agtagtgctc	aggaatggcc	tgttgaccat	cccagtgcca	480
gtattggctg	cccagcgaca	ctactgctcc	aggaatgaga	ttgatcagtg	cctctgctct	540
aacttggggg	tcacaagtct	ggcctgtgat	gacaccacta	ttaacagggt	ttaccagctg	600
gccttgggtc	gggttggtgt	tgggagtgaac	atgggtctgg	tctttgcttc	ctattctttg	660
attattcact	cagtgtctgaa	gctgaactct	gctaaagcaa	catctaaggc	cctgaataacc	720
tgcagctccc	accttatcct	cattctcttt	ttctacacag	ctattattgt	agtatctgtc	780
accacctggc	aggaagaagg	gctccccgca	tccctgttct	cctcaatgtg	ctgcatattg	840
tcateccctc	agcccttaac	cccatagtat	atgcccttag	gacctaggag	ctgagagcgg	900
gcttccagaa	gctgcttggt	ttgggagcag	atgtgtcc			938

<210> 576
 <211> 945
 <212> DNA
 <213> Unknown (H38g425 nucleotide)

<220>
 <223> Synthetic construct

<400> 576

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ccagtgtctag	agaagatcct	gtttggggta	ttccttgcca	tctacctaat	cacactggca	120
ggcaacctgt	gcatgatcct	gctgatcagg	accaattccc	acctgcaaac	acccatgtat	180
ttcttccttg	gccacctctc	ctttgtagac	atttgctatt	cttccaatgt	tactccaaat	240
atgctgcaca	atttcctctc	agaacagaag	accatctcct	acgctggatg	cttcacacag	300
tgtcttctct	tcatcgccct	ggtgatcact	gagttttaca	tccttgcttc	aatggcattg	360
gategctatg	tagccatttg	cagccctttg	cattacagtt	ccaggatgtc	caagaacatc	420
tgtgtctgtc	tggtcactat	cccttacatg	tatgggtttc	ttagtgggtt	ctctcagtca	480
ctgctaacct	ttcactttatc	cttctgtggc	tcccttgaaa	tcaatcattt	ctactgcgct	540
gatcctcctc	ttatcatgct	ggcctgctct	gacacccgtg	tcaaaaagat	ggcaatgttt	600
gtagttgcag	gctttaatct	ctcaagctct	ctcttcattc	ttcttctgtc	ctatcttttc	660
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tgtgtctccc	acctgacaat	agtcactttg	ttttatggaa	ccctcttctg	catgtacgta	780
aggcctccat	cagagaagtc	tgtagaggag	tccaaaataa	ctgcagtcct	ttatactttt	840
ttgagcccaa	tgctgaacct	attgatctat	agcctacgga	acacagatgt	aatccttgcc	900
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<210> 577

<211> 771

<212> DNA

<213> Unknown (H38g426 nucleotide)

<220>

<223> Synthetic construct

<400> 577

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ccaggggttg	tggtgtgtct	gtggcttggt	ccccgatctg	tgccatatgc	tgtgtgcctg	120
gtccagatgt	tctttgtaca	tgcaactgact	gccatggaat	caggtgtgct	tttggccatg	180
gcctgtgatc	gtgctgcggc	aataggcgct	ccactgcact	acctgtcctt	ggtcacaaa	240
gcctgtgtgg	gtttgcagc	cttggccctg	gcactgaaag	ctgtggctat	tggtgtacct	300
ttcccactgc	tggtggcaaa	gtttgagcac	ttccaagcca	agaccatagg	ccatacctat	360
tgtgcacaca	tggcagtggg	agaactgggt	gtgggtaaca	cacaggccac	caacttatat	420
ggctctggcac	tttcaactggc	catctcaggt	atggatatct	tggttatcac	tggtctctat	480
ggactcattg	cccatgctgt	gctgcagcta	cctaccgggg	aggcccatgc	caaggccttt	540
ggtacatgta	gttctcacat	ctgtgtcatt	ctggccttct	acatacctgg	tctcttctcc	600
tacctgcac	accgctttgg	tcatcacact	gtccccaaagc	ctgtgcacat	ccttctctcc	660
aacatctact	tgctgtgcc	acctgccctc	aacccccca	tctatggggc	ccgcaccaag	720
cagatcagag	accgactcct	ggaaaccttc	acattcagaa	aaagcccgtt	g	771

<210> 578

<211> 1074

<212> DNA

<213> Unknown (H38g427 nucleotide)

<220>

<223> Synthetic construct

<400> 578

gtgagcatga	gctttcttaat	aagaagtgtat	tcaacactac	acactccaat	gtgcttgctt	60
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gttaactttt	tttttccaag	agaaaaaccg	tttcccttat	tggttgcttt	atccaatttc	180
accttttcat	tgcaactggg	atcacagatt	atcatatgct	cacagtgatg	gtgtatgacc	240
actacatggc	catctgcaag	cctttgttat	atggaagcaa	aatgtccagg	tgtgtctgcc	300
tctgtctcac	tgctgtctcc	tatatattatg	gctctgcaaa	tggtctggta	caggtcatcc	360
tgatgctttg	tctgttcttc	tgtgaaccca	atgagatcaa	ccactttttt	tttttggag	420
aaaatgcatt	atatgcacat	ttaattccac	tataaatttt	tgaatggacg	gttggagagg	480
aagggagaaa	tacatattaa	cggagagaat	accacccaga	aagtatatac	aatgggagaa	540
aggaacctgt	tgatccaagt	ttccatattc	ttattatggc	atataagggtc	atgattattt	600
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tattatgcag	aaccacccct	cttagtcctc	gcctgcttgg	atacttatgt	caaagaaact	720
gccatgttca	tggtggctgg	ttccaacctc	atctgccctc	tcactatcat	ctttatttcc	780
tacactttca	tcttcacaga	cattctgcat	atctgcaactg	ctgaggggaag	gtacaatgcc	840
ttctccacct	gcgggtccct	tgtgactgcc	gtcactgtct	ttcaaggaac	gctgtttcac	900
atgtgcctga	ggcccccttc	tgaggcatct	gtagaacagg	ggaaaattgt	agctgctttt	960
tatatctttg	tgagtcctac	gttaaaccga	ttgatctacc	gtctgaggaa	taaaaatgtt	1020
aaaagaacaa	taagggaagt	tatccaaaag	aaactgtttg	ctaagtaagg	taga	1074

<210> 579

<211> 937

<212> DNA

<213> Unknown (H38g428 nucleotide)

<220>

<223> Synthetic construct

<400> 579

atgtttggtg	ctaattctcac	caccttccat	cccactctat	tcatttctct	tggtatccca	60
ggactggagc	aataccacat	ctggctttcc	attcctttct	accttatgta	catcactgca	120
gtcttgggaa	atggagccct	catcctagtt	gtcctcagtg	aacacaccct	ccatgtcttc	180
ctatccatgc	tggtctggcac	tgatatccctg	ctatccacca	ccactgtgcc	taaggccttg	240
gcgatcttct	gggtccacgc	tggggagata	gcctttgatg	cctgcattac	tcagatgttt	300
ttcattcatg	ttgcctttgt	ggctgagtca	ggaatcctgc	tggccatggc	atttgacagt	360
tatgtagcca	tttgtactcc	cttgagatac	actaccatct	taacttctat	ggtaaatgga	420
aaaatgacct	tgacaatctg	gggacaaagc	attggggacaa	tttttctctg	catattctctg	480
ctgaagaggc	tgccatactg	tcagaccaat	atcatccccc	actcatactg	tgagcacatt	540
gggtgtggcc	aattggcctg	tgctgacata	actgtcaata	tctgggatgg	cttttcagtg	600
ccaatggcat	cggttttggt	agatgttgca	ttcattgggt	tttctacac	tttgatcctc	660
caggctgtgt	ttagacttcc	ttcccaggag	ttcccagcaca	aagctcttaa	cacctgtggt	720
tctacattgg	agttgttctc	ctcttcttca	tcccatcatt	ttttactttc	ctgaccacc	780
gctttggcaa	gaatatcccc	catcatgtcc	acatacttct	ggcaaattctc	tacttgcttg	840
ttcccccatg	cttaacccca	ttatctacgg	agagaagacc	aagcaaatca	gggacagtat	900
ggctcatatg	ttatctgtgg	tggggaagtc	ttgagac			937

<210> 580

<211> 941

<212> DNA

<213> Unknown (H38g429 nucleotide)

<220>

<223> Synthetic construct

<400> 580

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ggactgacta	gccagccaga	gctgcagcct	atgctctttg	tggtattcct	cctgatttac	120
ctcatcacc	tgactgggaa	atgttgggatg	attttcctaa	tcagattcac	tcctcagctc	180
caaaccaca	tgtatttttt	ccttactcat	ttagcatgtg	tggtatattt	ttactccact	240
aatgtctctc	cacagagctt	gttaattttct	tatctgagaa	gaagaccatt	tcctacgctg	300
gggtgtctggc	ccagtgtttt	gtctttgtga	ctctgtctct	tactgagtat	tacatgcttg	360
gtgccatggc	ctatgactgc	tacatggcaa	tctgcaatcc	cctacattac	agcagcaaaa	420
tgtccagagc	agtttgcatc	tgctgggtga	ctttccccta	cttctggggg	tctatggtgg	480
gcacgatgca	agtaatactg	acctctcggt	tgctcttttt	tggacceaac	accatcaacc	540
atcttctactg	tactgaccca	cccctcttaa	tggtgacatc	ttctgacact	tacataaaac	600
aaactgcctt	gtttgtgtca	gcagggatta	acctcacagt	ttccctgctc	atcattctca	660
tctcctacat	tttcattttc	atcaccatta	tgaggatccg	ttccagtga	gggcagctca	720
aagccttctc	cacctgtggc	ttccacctga	cagctgtcac	tatgttctat	gggtccctat	780
tctgcatgta	cctgagacca	acaaatgagc	tgtctgttga	gcaagggaaa	atgggagtg	840
tgttttgtat	ttttgtgagt	cccatgctga	accggtttat	ctaccgcctg	agaaacaagg	900
atgtgaaaca	ggccttgaaa	agagtgttta	tgagaaacct	t		941

<210> 581

<211> 958
 <212> DNA
 <213> Unknown (H38g430 nucleotide)

<220>
 <223> Synthetic construct

<400> 581
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 atcctgggat tcacggatca cccagaatta cagtgtcttc tttttgtgtt gtttcttctc 120
 atctatatgt tcaccgttgt tggaaatctt ggcattgattc tattaatcaa gattgactca 180
 catctccata ctccaatgta ctttttcttc agtaacttgt gccttgttga cttctgttat 240
 tcttctgtca ttgccctaa tatgctgata aatttctggg tggagaaccc agtcatttca 300
 tttaaatgaat gtgccactca attcttcttt tttggctcct ttgctggcat tgaggggttt 360
 ctgttggctg tcatggccta tgactgttat gtggccatct gcaagcctct gctttataca 420
 gtccctgatgt caccacacct cagtgccttc ctgggtgttag ccacatatct tttgggcttt 480
 gtaaagtctg ccattcacac tggcttcacc ttccagctgt cattctgcca ctccaatatc 540
 attaactatt tttttgtga tattccaccc ctccctgaaac tcttgttctg atacacacat 600
 caatgagggt gtctcttctg cctttgccag ttttaatgaa ttgagctgtc tctactgat 660
 tcttgtttcc tgtctctaca tcttgtctgc catcttgaag atccactctg cagaagggag 720
 gcacaaggcc ttctccacct gtgcttccca cttggcggtg gtcactatct tcttggggac 780
 aatcctgttc atgtatctct gcgtccagc tccagctact caatggatca agacaaagtg 840
 gtgtctgtct tacacagtag tcatcccat gttgaatcct ttcacttata gtttgagaaa 900
 caaggaagtc aaagcttctt taagtaaaat gtttaaaaca gtctcttata tctctact 958

<210> 582
 <211> 897
 <212> DNA
 <213> Unknown (H38g431 nucleotide)

<220>
 <223> Synthetic construct

<400> 582
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 tacctcttag ctcttggtgc caacctcttc atcataatca ccattcaaca tgagaccgtg 120
 ctacatgaac ccatgtacca tttgctgggc atattagcag tgggtggacat tggcctggcc 180
 accaccatca tgcccaagat cctggccatc ttctggtttg atgccaaggc cattagcctc 240
 cccatgtgtt ttgctcagat ctatgccatc cactgcttct tctgcataga gtcaggcatc 300
 tttctctgca tggcagtaga cagatacata gccatctgtc gccctcttca gtacccctcc 360
 atagtcacta aagcttttgt cttcaaagcc acagggttca tcatgctcag gaatggcctg 420
 ttgaccatcc cagtgcctat actggctgcc cagagacact actgttccag gaatgaaatc 480
 gagcactgcc tctgtcttaa cttgggggtt atcagcctgg cttgtgatga catcactgtg 540
 aacaaatttt accaactgat gctagcatgg gtcttggttg ggagtgatat ggctctggta 600
 ttttcttctt atgctgtaat ccttcaactc gtgctgaggc tgaactcagc agaagcaatg 660
 tccaaggctc tgagcacttg tagctccac ctcactctca tcctcttoca cacaggatc 720
 attgtgctgt ctgtcacaca ccttgcagag aaaaagattc cccttattcc tgtgttctt 780
 aatgtgctgc acaatgtcat cccccctgca ctcaaccccc tggcctgtgc actcaggatg 840
 cacaaactca gactgggctt tcagagactg cttggactgg gtcaggacgt gtccaag 897

<210> 583
 <211> 951
 <212> DNA
 <213> Unknown (H38g432 nucleotide)

<220>
 <223> Synthetic construct

<400> 583
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 ctcttaggac tttccgacaa tccagatcta caaggagtcc tctttgcatt gtttctgttg 120

atctatatgg	caaacatggt	gggcaatttg	gggatgattg	tattgattaa	gattgatctc	180
tgtctccaca	cccccatgta	tttctttctc	agtagcctct	cttttgtaga	tgccctcttac	240
tcttcttccg	tcactcccaa	gatgctgggtg	aacctcatgg	ctgagaataa	ggccatttct	300
tttcatggat	gtgctgcccc	gttctacttc	tttggctcct	tcctggggac	tgagtgtctc	360
ctgttgccca	tgatggcata	tgaccgctat	gcagccattt	ggaacccct	gctctacca	420
gttctcgtgt	ctgggagaat	ttgctttttg	ctaatagcta	cctccttctt	agcaggttgt	480
ggaaatgcag	ccatacatat	agggatgact	tttaggttgt	ccttttgtgg	ttctaataagg	540
atcaaccatt	tctactgtga	caccccgcca	ctgctcaaac	tctcttgctc	tgataccac	600
ttcaatggca	ttgtgatcat	ggcattctca	agttttattg	tcatcagctg	tgttatgatt	660
gtcctcattt	cctacctgtg	tatcttcatt	gccgtcttga	agatgccttc	gttagagggc	720
aggcacaag	ccttctccac	ctgtgcctct	tacctcatgg	ctgtcaccat	attctttgga	780
acaatcctct	tcatgtactt	gcgccctaca	ctagctact	caatggagca	agacaagggt	840
gtctctgtct	tttatacagt	aataatccct	gtgctaaatc	ccctcatcta	tagtttaaaa	900
aataaggatg	taaaaaaggc	cctaaagaag	atcttatgga	aacacatctt	g	951

<210> 584

<211> 951

<212> DNA

<213> Unknown (H38g433 nucleotide)

<220>

<223> Synthetic construct

<400> 584

atgagtcaca	ccaatgttac	catcttccat	cctgcagttt	ttgtccttcc	tggaatccct	60
gggttgagg	cttatcacat	ttggctgtca	atacctcttt	gcctcattta	catcactgca	120
gtcctgggaa	acagcatcct	gatagtgggt	attgtcatgg	aacgtaacct	tcatgtgccc	180
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cccaaggccc	tagccatctt	ttggcttcaa	gcacataaca	ttgcttttga	tgccctgtgtc	300
acccaaggct	tctttgtcca	tatgatgttt	gtgggggag	cagctatcct	gttagccatg	360
gcctttgatc	gctttgtggc	catttgtgcc	ccactgagat	atacaacagt	gctaacatgg	420
cctgtttgtg	ggaggattgc	tctggccgtc	atcacccgaa	gcttctgcat	catcttccca	480
gtcatattct	tgctgaagcg	gctgcccttc	tgccctaacca	acattgttcc	tcactcttac	540
ttgtgagcata	ttggagtggc	tcgttttagcc	tgtgtctgaca	tcactgttaa	catttggtat	600
ggcttctcag	tgcccatgtt	catggctatc	ttggatgtta	tcctcatcgc	tgtgtcttac	660
tcactgatcc	tccgagcagt	gtttcgtttg	ccctcccagg	atgctcggca	caaggccctc	720
agcacttggt	gctcccacct	ctgtgtcatc	cttatgtttt	atgttccatc	cttctttacc	780
ttattgacct	atcatttttg	gcgtaatat	cctcaacatg	tccatatctt	gctggccaat	840
ctttatgtgg	cagtgcacc	aatgctgaac	cccattgtct	atggtgtgaa	gactaagcag	900
atacgtgagg	gtgtagccca	ccggttcttt	gacatcaaga	cttgggtgctg	t	951

<210> 585

<211> 915

<212> DNA

<213> Unknown (H38g434 nucleotide)

<220>

<223> Synthetic construct

<400> 585

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ggaatgcagc	tgggcctctt	cgtgggtgtt	ctgggcgtgt	actctctcac	tgtggttagga	120
aatagcacc	tcacgtgtt	gatctgtaat	gactcctgcc	tccacacacc	catgtatttt	180
gtcgtgggaa	atctgtcgtt	tctggatctc	tggtattctt	ctgtctacac	cccaaagatc	240
ctagtgcact	gcattctctga	agacaaaagc	atctcctttg	ctggctgcct	gtgtcagttc	300
ttcttctctg	cagggctggc	ctatagttag	tgctacctgc	tggctgcctg	ggcttatgac	360
cgctacgtgg	ccatctccaa	gccctgctt	tatgcccgag	ccatgtccat	aaagctgtgt	420
gcattgctgg	tagcagtctc	atattgtggt	ggctttatta	actcttcaat	catcaccaag	480
aaaacgtttt	cctttaactt	ctgccgtgaa	aacatcattg	atgacttttt	ctgtgatttg	540
cttcccttgg	tggagctggc	ctgtggcgag	aaggggcggt	ataaaattat	gatgtacttc	600
ctgctggcct	ccaatgtcat	ctgccccgca	gtgctcatcc	tggcctccta	cctctttatc	660

atcaccagt	tcttgaggat	ctcctcctcc	aagggctacc	tcaaagcctt	ctccacatgc	720
tcctcccacc	tgacctctgt	cacttttatac	tatggctcca	ttctctacat	ctacgtcttc	780
cccagatcta	gctattcttt	tgatatggac	aaaatagttt	ctacatttta	cactgtggta	840
ttccccatgt	tgaatctcat	gatctacagc	ctaaggaata	aggatgtgaa	agaggctctg	900
aaaaaacttc	tccca					915

<210> 586

<211> 942

<212> DNA

<213> Unknown (H38g435 nucleotide)

<220>

<223> Synthetic construct

<400> 586

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ctgctaggca	actgtaccct	tctcttcatt	atccgggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcaacc	attgacttgg	ttctttcttc	tacaacgctg	240
cccaaaatgc	ttgccatatt	ctggttcagg	gatcaggaga	tcaacttctt	tgctgtctg	300
gtccagatgt	tcttccttca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	catctgcaag	ccattgcact	acacgacgg	cctgactggg	420
tccctcatca	ccaagattgg	catggctgct	gtggcccggt	ctgtgacact	aatgactcca	480
ctccccctcc	tgctcagacg	cttccactac	tgccgaggcc	cagtgtattgc	ccattgctac	540
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ggcattgctg	tggccatggt	tagtgtgggt	ttggacctgc	tctttgttat	cctgtcttat	660
gtcttcatcc	ttcaggcagt	tctccagctt	gcctctcagg	aggccccgta	caaggcattt	720
gggacatgtg	tgtctcacat	aggtgccatc	ctgtccacct	acactccagt	agtcattctc	780
tcagtcatgc	accgtgtagc	ccgccatgct	gccccctgtg	tccacatact	ccttgctatt	840
ttctatctcc	ttttcccacc	catgggtcaat	cctatcatat	atggagtcaa	gaccaagcag	900
attcgtgagt	atgtgctcag	tctattccag	agaaagaaca	tg		942

<210> 587

<211> 937

<212> DNA

<213> Unknown (H38g436 nucleotide)

<220>

<223> Synthetic construct

<400> 587

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gctgagctgc	agtccttctt	ttttgtggta	tttctagtca	tctaccttat	cacagtaatc	120
ggcaatgtga	gcatgatctt	gttaatcaga	agtgactcga	cactacacac	tccaatgtac	180
ttcttctca	gtcacctctc	ctttgttagat	ctctgttata	ccaccaatgt	tactctcag	240
atgctgggta	actttttatc	caagagaaaa	accatttcct	tcacgggctg	ctttatccaa	300
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gaccgctaca	tggccatctg	caagcccttg	ttatatggaa	gcaaaatgac	cagggtgtgc	420
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caccctgatg	cttcgtctgt	ccttctgtgg	acccaatgac	atcaaccact	tttactgtgc	540
ggaccacccc	ctcttagtcc	tcgcctgctc	agatacttat	gtcaaagaga	ccgccatgtt	600
gggtgtggct	ggttccaacc	tcatttgctc	tctcacgctc	atcctcattt	cctacacttt	660
catcttcact	gccattctgc	gtatccacac	tgctgagggg	aggcgcaagg	ccttctccac	720
ctgctgggtct	catgtgaccg	ctgtcactgt	cttctatggg	acactgttct	gcatgtacct	780
gaggccccct	tctgagacat	ctatacaaca	ggggaaaatt	gtagctgttt	tttatatctt	840
tgtgagtccg	atgttaaacc	cattgatcta	cagcctgagg	aataaagacg	ttaaaagaag	900
tataaggaaa	gttattcaaa	agaaactgtt	tgctaag			937

<210> 588

<211> 942

<212> DNA

<213> Unknown (H38g437 nucleotide)

<220>

<223> Synthetic construct

<400> 588

atgtcagcct	ccaatatcac	cttaacacat	ccaactgcct	tcttggtggt	ggggattcca	60
ggcctggaac	acctgcacat	ctggatctcc	atccctttct	gcttagcata	tacactggcc	120
ctgcttgga	actgcactct	ccttctcatc	atccaggctg	atgcagccct	ccatgaaccc	180
atgtacctct	ttctggccat	gttggcagcc	atcgacctgg	tcctttcctc	ctcagcactg	240
cccaaaatgc	ttgccatatt	ctgggttcagg	gatcgggaga	taaacttctt	tgectgtctg	300
gcccagatgt	tcttccctca	ctccttctcc	atcatggagt	cagcagtgtc	gctggccatg	360
gcctttgacc	gctatgtggc	tatctgcaag	ccactgcact	acaccaaggt	cctgactggg	420
tccctcatca	ccaagattgg	catggctgct	gtggcccggg	ctgtgacact	aatgactcca	480
ctcccttcc	tgctgagatg	tttccactac	tgccgaggcc	cagtgatcgc	tcactgctac	540
tgtgaacaca	tggctgtggt	gaggctggcg	tgtggggaca	ctagcttcaa	caatatctat	600
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atctttatct	ttcaggcagt	tctactgctt	gcctctcagg	aggcccgcga	caaggcattt	720
gggacatgtg	tctctcatat	aggtgccatc	ttagccttct	acacaactgt	ggtcactctc	780
tcagtcatgc	accgtgtagc	ccgccatgct	gccctcatg	tccacatcct	ccttgccaat	840
ttctatctgc	tcttcccacc	catgggtcaat	cccataatct	atgggtgtcaa	gaccaagcaa	900
atccgtgaga	gcactctggg	agtattccca	agaaaggata	tg		942

<210> 589

<211> 936

<212> DNA

<213> Unknown (H38g438 nucleotide)

<220>

<223> Synthetic construct

<400> 589

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ccttggaact	gcaccctcct	tctcatcatc	caggctgatg	cagccctcca	tgagcccata	180
tacctctttc	tggccatggt	ggcagccatc	gacctggtcc	tttctcctc	agcattgccc	240
aaaatgcttg	ccatattctg	gttcagggat	cgggagatca	acttttttgc	ctgtctgggtc	300
cagatgttct	tccttcaactc	cttctccatc	atggagtcag	cagtgtgtgt	ggccatggcc	360
tttgaccgct	atgtggccat	ctgcaagcca	ctgcactaca	ccacggctcct	gactgggtcc	420
ctcatcacca	agattggcat	ggctgtgtgt	gcccggtgtg	tgacactaat	gactccactc	480
cccttctctg	tgagatgttt	ccactactgc	cgaggccag	tgattgcccg	ctgtactgt	540
gaacacatgg	ctgtgggtcag	gctggctgtg	ggaacactag	cttcaacaat	atctatggca	600
ttgctgtggc	catgtttatt	ggagtgttgg	atctattctt	tatcatccta	tcttataatc	660
ttatccttca	ggcagttcta	caactctcct	ctcaggaggc	ccgctacaaa	gcatttgga	720
catgtgtctc	tcacataggt	gccatcttag	ccttctacac	accttcagtc	atctcttcag	780
tcatgcaccg	tgtggcccgc	tgtgtctgct	cacacgtcca	cattctcctc	gccaatttct	840
atctgtctct	cccaccatg	gtcaatccca	tcactacagg	cgtaaagacc	aagcagatcc	900
gtgacagtct	tgggagtatt	cccagaaaag	gatgtg			936

<210> 590

<211> 955

<212> DNA

<213> Unknown (H38g439 nucleotide)

<220>

<223> Synthetic construct

<400> 590

atgacaaccc	acaactccac	tggttagcagc	cactcactct	tcattctgct	gagcattcct	60
ggcttagaag	accagcacac	atggatgtct	ctccccctct	ttatttccta	ccttggtgct	120
ttccttggga	acagcctcat	catcttcatc	atcatcactg	aatgcagcct	ccacgaaccc	180

atgtaccttt	tcctctgcat	gctggctgtg	gctgacctta	tcctgtctac	taccactgtg	240
cccaaggccc	tagccatatt	ttggttctat	gctggagcaa	tatcccttgg	tggctgtgtt	300
acccaaatct	tctttatcca	tgctaccttc	atcgaggaa	caggaattct	gttggcgatg	360
gcacttgacc	gctatgtggc	catctgtgat	ccactgcact	ataccacagt	gctcagtcgt	420
gcaaaaatca	caaagattgg	cttggctgtg	gtcctgagaa	gcttctgtgt	gatcatgcca	480
gatgtgtttc	tggtaaagcg	gctgcctttc	tgccatagca	atctgctgcc	acatacctac	540
tgtgagcaca	tggctgttgc	caagtttgct	tgtgctgata	ttcatgtcaa	tgtttggtat	600
ggcttgtctg	tccttctcta	tactgtagt	ctagatgcct	tgcttatctt	agtgtcctaa	660
agcttcaccc	tgtatacagg	cttccacctc	ccctccccaa	ggagctcggc	aaaaggctct	720
gggcacatgt	ggctcccacc	tcagagtcac	ttccatgttc	tacttgccctg	gtatttttac	780
cataattacc	cagcggtttg	ggcaccatgt	tcctctccat	acacacattc	tgctgggtaa	840
tgtctgggtg	ttggctcctc	ccatgctgaa	ccccatcatt	tatgggatca	acaccaggca	900
gattcaagag	tgtgtgctca	gtcttttgtc	ctcacagagg	aatgatgct	agatt	955

<210> 591

<211> 939

<212> DNA

<213> Unknown (H38g440 nucleotide)

<220>

<223> Synthetic construct

<400> 591

atgaattggg	taaattgacag	catcatacag	gagtttattc	tgctggggtt	ctcagatcga	60
ccttggctgg	agtttccact	ccttgtgggc	ttcttgattt	cttacctgt	gaccatcttt	120
ggcaatctga	ccattattct	agtgtcacgc	ctggacacca	aacttcatac	ccccatgtat	180
ttttttctta	ccaatctatc	actcctggat	ctttgtttaca	ccacatgtac	agtcccacaa	240
atgctagtaa	atttatgcag	catcaggaaa	gtaatcagtt	atcgtggctg	tgtagcccag	300
cttttcatat	ttctggcctt	gggggctact	gaatatcttc	tcctggccgt	catgtccttt	360
gataggtttg	tagctatttg	tcggcctctc	cattactcag	ttatcatgca	ccagagactc	420
tgctccagt	tggcagctgc	atcctgggtt	actggtttta	gtaactcagt	gtggttgtct	480
accctgactc	tccagctgcc	actctgtgac	ccctatgtga	tagatcactt	tctctgtgaa	540
gtccctgcac	tgctcaagtt	atcttgtgtt	gagacaacag	caaattgaggc	tgaactattc	600
cttgtcagtg	agctcttcca	tctaataccc	ctgacactca	tccttatata	atatgtcttt	660
attgtccgag	cagtattgag	gatacagtc	gctgaagggtc	gacaaaaagc	atttgggaca	720
tgtggttccc	atctaattgt	ggtgtctctt	ttttatagta	cagccgtctc	tgtgtacctg	780
caaccacctt	cgcccagctc	caaggaccaa	ggaaagatgg	tttctctctt	ctatggaatc	840
attgcacca	tgctgaatcc	ccttatatat	acacttagga	acaaggagg	aaaggaaggc	900
tttaaaaggt	tggttgcaag	agtcttctta	atcaagaaa			939

<210> 592

<211> 997

<212> DNA

<213> Unknown (H38g441 nucleotide)

<220>

<223> Synthetic construct

<400> 592

atggaaaaat	ccaatgtcag	ctcagtgat	ggttttatct	tggtggggtt	ctctgatcgt	60
cccaagctgg	agatgggtgt	ctttacagta	aattttattc	tgtattcagt	ggctgtgctg	120
ggaaattcaa	ccataatcct	tgtgtgtata	ttagactctc	aacttcatac	cccaatgtac	180
ttctttctgg	caaattcttt	ctttctagat	ctctgcttca	gtactagttg	catcccacaa	240
atgctggtaa	acctctgggg	ccctgacaag	actattagct	gtgctggctg	tgttgtccag	300
cttttctctt	tcctttctgt	caggggaatt	gagtgcaccc	ttctggctgt	catggcctat	360
gacagctatg	ctgcagtcct	caaaccgttg	cgctatctgg	tcattatgca	cctccagctg	420
tgtctaggac	tgatggctgc	agcctggggg	agtggactgg	tcaatgccgt	tgctcatgtca	480
ccactaacaa	tgacctctct	cagaagtggc	cgccgcggag	ttaaccattt	cctctgtgaa	540
agccagcact	gatcaagatg	gcttgttttg	atgttctgtc	agtggaaatg	ctggtttttg	600
cttttgccgt	tctcattgtc	ctactgcccc	tcactcttat	tcttgtctcc	tacggctaca	660
ttgctgcagc	tgtgctaagc	atcaagtcag	ctgccaggca	atggaaggcc	ttccatacct	720

gtagctctca	cctcacagt	gtctccctgt	tttatgggag	catcatctat	atgtatatgc	780
agccaggaaa	cagttcttcc	caagaccaag	gcaagtttct	cactctcttc	tacaacctgg	840
tgactcctat	gttgaatctg	ctcatctata	ctttaaggaa	taaggagggtg	aaaggagcac	900
tgaagaaggt	tttggggagg	caataatgaa	ctggagaaat	atgataagtt	gtgaagtctt	960
aggcaaaata	tcttttccaa	atacatttat	tttgtgc			997

<210> 593

<211> 950

<212> DNA

<213> Unknown (H38g442 nucleotide)

<220>

<223> Synthetic construct

<400> 593

caagtagttc	atacaggctt	ttctccctag	ctatacgtct	tcaccctgct	gggaaatggg	60
gcacccctgg	gctcatctgg	ctggactcca	gactgcacac	ccccatgtac	ttctttctct	120
cacacctggc	catcattgat	atttcgtatg	cttccaacaa	tgtccccaag	atgctgacaa	180
accttggcct	gaacaagaga	aaaacaatct	cctttgtccc	atgcacaatg	cagacctttt	240
tatacatggc	ttttgctcac	actgagtgtc	tcactcttgg	aatgatgtcc	tacgatcggt	300
acatggctgt	ctgccaccct	ctgcaatatt	ctgtcatcat	gagatgggga	gtgtgcacag	360
tcctggctgt	cacttcttgg	gcatgtgggt	ccttctggcc	ctgggtccatg	tggttctcat	420
cctgaggctg	cccttctgtg	ggcccatga	aatcaaccac	ttcttctgtg	aaatcctgtc	480
tgctctcaag	ttggcctgtg	ctgacacctg	gctcaaccag	gtgggtcatct	ttgcttcttc	540
agtgttcac	ctggtggggg	cgctctgcct	ggtgctgggtc	tcctactcgc	gcacccctggc	600
ggccatcttg	aggaatcagt	ctggggaggg	gcgcagaaag	ggcttctcca	cctgctactc	660
ccacctttgc	atggtgggac	tcttctttgg	cagcgccatt	gtcacgtaca	tggcccccac	720
gtcccccat	cctgaggagc	agcagaaagt	tctttccctg	ttttacagcc	ttttcaatcc	780
aatgctgaac	ccccctgata	tatagcctaa	ggaatgcaga	ggtcaagggc	gccctgagga	840
gtgcactgag	gaaggagagg	ctgacgtgag	acatctcaaa	gggaaccatg	gggagggagc	900
cttgcctcct	gcaaaatata	gaagttggct	tttttttttg	tcttctgcta		950

<210> 594

<211> 711

<212> DNA

<213> Unknown (H38g443 nucleotide)

<220>

<223> Synthetic construct

<400> 594

cagatgctga	cagattgggtg	gggacctaat	aggaccacaa	gttacgtgaa	ctcaccattc	60
aattccttgt	ctctctgtag	ttatgtgcca	ctatataatt	tctacaatta	ttttataatt	120
atatgccatc	ctttgttaata	tttggttaatc	atgaacctat	atctectcct	taatcttact	180
ttaataacttg	agtataaatt	cattcatctt	tgctcatcatg	tatactctca	tcctaaaatt	240
cccaaggat	gaaaaaaaaa	aaccttcagg	ataattccct	ccatgtgttg	ctagctatgc	300
tgaaaacagt	ttttctagat	gctacaattg	aagaaatgtc	tgtatttgtg	ttaatacaat	360
gtaaatgtcc	taatatgcct	tatcagtaat	tttacctgct	atggctacat	tgagggtgcac	420
taagaatgaa	tactagtaat	taaattagaa	gcaagctgag	aaatcagtat	catcatcatc	480
atcatagggtg	tcatttcatt	atagattcaa	tcttctatgg	aatcattgtg	taaatgctct	540
tgaagatggt	aacaactcct	cccaagacca	agaaatgatt	ctttatcttg	ttttacacta	600
tactaactcc	aagtctcaaa	cttctagttt	atctgttaag	aataaagata	taaaggatat	660
ttcaaggaga	atactaagat	tggcagggaa	tcttcaaaaa	tgaaggaaa	c	711

<210> 595

<211> 765

<212> DNA

<213> Unknown (H38g444 nucleotide)

<220>

<223> Synthetic construct

<400> 595

atgtattttc	tactgagtca	gctctccctc	attgacctaa	attacatctc	caccattggt	60
cctaagatgg	catctgattt	tctgcatgga	aacaagtcta	tctccttcac	tgggtgtggg	120
attcatagtt	tcttcttcac	gacttttagcc	gttgtagaag	cgctactcct	gatataaatg	180
gcctatgttc	gttgcatgac	tatttgcttt	cctctccact	atctcatgcy	catgagcaaa	240
agagtgtgtg	tgctgatgat	aacaggatct	tggatcatag	gctcgatcaa	tgcttgtgct	300
cacactgtat	atatactcca	tattccttat	tgcccatcta	gggttatcaa	tcatttcttc	360
tgtgatgtcc	cagcaatggg	gactctggcc	tgcatggaca	cctgggtcta	tgagggcaca	420
gtgcttttga	gcgccaccat	ctttctcgtg	tttcccttca	ttgctatttc	atgttcctat	480
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ctgacctgca	gcacccacct	cactgtagtg	actttctact	atgcaccctt	tgcttacacc	600
tatctacgcc	caagatccct	gcgatctccg	acagaggaca	agggtctggc	tgtcttctac	660
accatctca	ctcaatgct	caaccccatc	atctacagcc	tgagaaacaa	ggaggtgatg	720
ggggccctga	cacgagtgat	tcagaaaatc	ttttcagtga	aaata		765

<210> 596

<211> 960

<212> DNA

<213> Unknown (H38g445 nucleotide)

<220>

<223> Synthetic construct

<400> 596

ctgtcatgac	caaccagagc	tgcccagaaa	cagttcatct	tactgggttt	ctcaggcaga	60
cccaggctgg	agcatgtcct	ctttgtgttt	gtcctcatct	tctacctgt	gaccttagtg	120
ggcaacatca	tcattatctt	gatctccac	ctggaccct	gcctccacat	gcccattgtac	180
ttcttctca	ctaacttgct	tttccatgat	ctctgcttca	ccaccagttc	tatccccag	240
ctgcttttca	atctaggcag	cccaggcaag	actatcagcc	acacgggctg	tgccatccag	300
ctcttcatgt	tcctgggcct	gggtggcaag	agtgtattct	cttggcagcc	gtggcctatg	360
accgcttcat	tgcaatctgc	aagccccttc	actattctgt	cattatgcac	cctcagctgt	420
gctggaagtt	ggtgtctgtg	gcccgggggt	gttggactcc	tcagttctct	agttatgtct	480
cctgtgacta	tgaagctgcc	acgatgtgga	agatgtaagt	tgaacattt	cctgtgtgag	540
atgccagctc	taataaaaaat	cacctgtgtg	gacacagtg	ctatggagag	cactgttttc	600
accttatcgg	tagtaattgt	cctgatgcct	ttgtgtctta	tcctcatctc	ttatagctac	660
attgccctag	cagtgtctgag	aatcaagtca	gccgcaggaa	gaagggaaggc	cttcaatatg	720
tgcggttccc	acctcaccgt	ggtctccttg	ttttatggga	atattatcta	tatgtatatg	780
caaccatgaa	ataattcttc	tcaggaccaa	gggaagtccc	ttaccctttt	ctacaactta	840
atgaccccca	tgttaaaccc	tgtcatctat	acactgagaa	acaaggatgt	aaaagggtgca	900
ctgaagaggc	ttgtgtctag	aaaacacagt	gacagtgact	gctcttgaga	ctgcttcttt	960

<210> 597

<211> 377

<212> DNA

<213> Unknown (H38g446 nucleotide)

<220>

<223> Synthetic construct

<400> 597

atggaaaatt	acaatcaaac	atcaactgct	ttcatcttgt	tgggattgtc	gccaccacca	60
aaaattggcc	atttcatctt	cattctcatt	aatttcgttt	tcctaattggc	tctaattgga	120
aacctatcca	tgattcttct	catcttcttg	gacatccatc	tcacacacac	catgtatttc	180
ctacttagtc	agctctccct	cattgacct	aatttatatt	ccaccattgt	tcctaagatg	240
gtttatgatt	tttcatgtat	ggaaacaagt	ctatctcctt	cactgggtgt	gggattcaga	300
gtttcttctt	cctgacttta	gcagggtgag	aagcgctgct	cctgacatca	atggcctatg	360
atcgttatgt	ggctatt					377

<210> 598

<211> 979

<212> DNA

<213> Unknown (H38g447 nucleotide)

<220>

<223> Synthetic construct

<400> 598

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cctcagctgg	aaacagctct	ctttgtggtc	atcttgcata	tctactttct	gagctttctg	120
ggcaatggca	ccattatact	tttatccatt	gtagatcctc	gcctccatac	ccctatgtat	180
ttcttctctc	ccaatctctc	ttttatggat	ctttgtttga	ccacttgtag	tgtccctcag	240
acactgggtca	actttaaggg	gaaggacaag	accatcacct	atggtggctg	cgtgacccag	300
ctattcattg	ccttgggact	cggggggagt	ggagtgtgtc	ttattgtctg	ccatggccta	360
tgaccgctat	gcagccgtct	gccgcccact	ccactacatg	gtgagcatgc	atccccaact	420
ttgcttgtag	ttggttgtaa	ccacttggct	cacagggttt	ggcaattctg	tgatacagac	480
agcattgacc	atgactctcc	ccctctgtga	taaaaaccaa	gtggatcatt	tcttctgtga	540
agttccagt	atgctgaaac	tgtcctgcac	caacacctcc	atcaacgagg	ctgaaatctt	600
tgctgtcagt	gtcttcttct	tgggtgggtcc	tctctcactc	atcttagcat	cctatgggtca	660
cattactcat	gcagtcctga	agataaagtc	agctcaaggg	aggcagaagg	cttttggaac	720
ctgtgggtct	cacctcctgg	tagtgatcat	tttctttggg	acactcatct	ccatgtacct	780
ccagcctccc	tccagttatt	cacaggatgt	gaacaaaagc	attgcactct	tctatactct	840
ggtgactcct	ctactgaatc	ccctaattta	cactctgagg	aacaaggaag	tcaaaggggc	900
aactaagaag	actagtgggg	aggaccatag	atgcatgaga	aagttaacgc	agggtttgca	960
gttccaaaca	tttgtgcac					979

<210> 599

<211> 936

<212> DNA

<213> Unknown (H38g448 nucleotide)

<220>

<223> Synthetic construct

<400> 599

atggaaaatt	acaatcaaac	atcaactgat	ttcatcttat	tggggctggt	tccaccatca	60
ataattgacc	ttttcttctt	cattctcatt	gttttcattt	tcctgatggc	tctaattgga	120
aacctgtcca	tgattcttct	catcttcttg	gacacccatc	tccacacacc	catgtatttc	180
ctactgagtc	agctctccct	cattgacctt	aattacatct	ccaccattgt	tcctaagatg	240
gcactctgatt	ttctgcatgg	aaacaagtct	atctccttca	ctgggtgtgg	gattcagagt	300
ttcttcttct	tggcattagg	agggtgcagaa	gcactacttt	tggcatctat	ggcctatgat	360
cgttacattg	ctatttgctt	tcctctccac	tatctcatcc	gcattgagcaa	aagagtgtgt	420
gtgctgatga	taacagggtc	ttggatcata	ggctcgatca	atgcttgtgc	tcacactgta	480
tatgtactcc	atattcctta	ttgccgatcc	agggccatca	atcatttctt	ctgtgatgtc	540
ccagcaatgg	tgactctggc	ctgcatggac	acctgggtct	atgagggcac	agtgtttttg	600
agtgccacca	tctttctcgt	gtttcccttc	attgggtattt	catgttccta	tggccaggtt	660
ctcttctgtg	tctaccacat	gaaatctgca	gaagggagga	agaaagccta	tttgacctgc	720
agcaccacc	tcactgtagt	aactttctac	tatgcacctt	ttgtctacac	ttatctacgt	780
ccaagatccc	tgcgatctcc	aacagaggac	aaggttctgg	ctgtcttcta	caccatcttc	840
accccaatgc	tcaaccccat	catctatagc	ctgaggaaca	aggaggtgat	gggggccctg	900
acacgagtga	gtcagagaat	ctgctctgtg	aaaatg			936

<210> 600

<211> 936

<212> DNA

<213> Unknown (H38g449 nucleotide)

<220>

<223> Synthetic construct

<400> 600

atgcccaatt	caaccaccgt	gatggaattt	ctcctcatga	ggttttctga	tgtgtggaca	60
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ctacagattt	tacattctgc	atccttcttt	atgttgatt	tggttaactct	aatgggaaac	120
atcctcattg	tgaccgtcac	cacctgtgac	agcagccttc	acatgcccac	gtacttcttc	180
ctcaggaatc	tgtctatctt	ggatgcctgc	tacatttctg	ttacagtccc	tacctcatgt	240
gtcaattccc	tactggacag	caccaccatt	tctaaggcgg	gatgtgtagc	tcaggtcttc	300
ctcgtggttt	tttttgtata	tgtggagctt	ctgtttctca	ccattatggc	tcatgaccgc	360
tatgtggctg	tctgccagcc	acttcaactac	cctgtgatcg	tgaactctcg	aatctgcac	420
cagatgacac	tggcctccct	actcagtgg	cttgtctatg	caggcatgca	cactggcagc	480
acattccagc	tgcccttctg	tccgtccaac	gttattcatc	aattcttctg	tgacatcccc	540
tctctgctga	agctctcttg	ctctgacacc	ttcagcaatg	aggatcatgat	tgttgtctct	600
gctctggggg	taggtggcgg	ctgtttcatc	tttatcatca	ggctttacat	tcacatcttt	660
tcgaccgtgc	tcgggttttc	aagaggagca	gacagaacaa	aggccttttc	cacctgcac	720
cctcacatcc	tgggtgggtgc	agtcttcttc	agttcatgct	cttctgtgta	cctcaggcca	780
cctgcgatac	ctgcagccac	ccaggatctg	atcctttctg	gttttttattc	cataatgcct	840
ccctctttta	accctattat	ttacagtctt	agaaataagc	aaataaagg	ggccatcaag	900
aaaatcatga	agagaatttt	ttattcagaa	aatgtg			936

<210> 601

<211> 931

<212> DNA

<213> Unknown (H38g450 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(931)

<223> n = A,T,C or G

<400> 601

aggaaatgccc	cactggaaaa	atacaatcaa	acatcaactg	atttcatctt	attgggggatc	60
ttccccaccat	ccagaattgg	ctttctcttc	ttcattctcc	ttgttctcat	tttgctattg	120
gctttaattg	gcaatcagtc	cgtgatcctt	ctcatcttct	tggacactca	tctccacacg	180
ccattttatt	tcttacttag	tcggctctac	ctcattgacc	taaattacat	ctccactatt	240
gtccccagat	gttttctgat	tttctgtttg	gaaacaagtc	tatttctctc	attgggtgtg	300
gaattcagag	tttcttcttt	gtgacttttag	cagggtgcaga	aatgctgcca	ctgacatcaa	360
tggcctgtga	tcattatgta	gctgtttgct	ttcctctcca	ctatcccatc	catatgagca	420
agatagtatg	tgtgtgatg	aataggatct	tggataatgg	gctctatcga	cacttgtgtc	480
cacatttcat	atatgcccc	tatccctggt	gctcagccag	ggctgtgatg	tcccagccat	540
ggtgactctg	gccttcgtgg	acacctgggt	ctatgagtgc	acagtgtttt	tgagcacaac	600
cctctttctc	atgtttacct	ttattgggtat	tgcattgttc	tatgggtgagg	ttctccttac	660
tgtctaccac	attaaatctg	cagaaggagg	gaagaaggcc	tattcgacct	gtagcaccac	720
cctcactgta	gtaattntct	actatgcaat	gtttgcttat	acctatctat	atccaagata	780
cctgcaatct	ccaacagagg	acaaggttct	ggctgtgttc	tacaccatcc	tcacctcaat	840
gctcaacccc	atcatctaca	gcctgagaaa	caggggaggtg	atggggggccc	tgacacgagt	900
gagtcagaga	atcttccctg	tgaagatgaa	g			931

<210> 602

<211> 577

<212> DNA

<213> Unknown (H38g451 nucleotide)

<220>

<223> Synthetic construct

<400> 602

agacacacag	agccacggaa	tctcacaggt	gtctgagaat	tcctcctcct	gggactctca	60
gaggatccag	aactgcagcc	tgtcctcgct	ttgtctgtccc	tgtccctgtc	cctgtccttg	120
tatctgggtca	tggttctgag	gaacctgctc	agcatcctgg	ctgtcagctc	tgactccccc	180
ctccataccc	ccatgtactt	cttccctctc	aacctgtgct	gggctgacat	cgggttcaact	240
tcggccacgg	ttcccaagg	gactgtggac	atgcagtcgc	atagcagagt	catctctcat	300
gcgggctgcc	tgacacagat	gtctttcttg	gtcctttttt	gcatgtatag	aatgcatgct	360

cctgactgtg	atggcctatg	acggctttgt	agccatctgt	ctccctctgc	actaccagtc	420
catcatgaat	cctcacctct	gtgtcttctt	cgttttgggtg	tcctttttcc	ttagcctgtt	480
ggattccag	ctgcaçggtt	ggattgtgtg	acaattcacc	atcatgaaga	atgtggaaat	540
ctctcatttt	gtaagtgacc	cctctcaact	tctcaac			577

<210> 603

<211> 952

<212> DNA

<213> Unknown (H38g452 nucleotide)

<220>

<223> Synthetic construct

<400> 603

atggacagaa	gaaaccagac	ctgcatctat	gaattttcttc	tcattgggctt	ctctgaacac	60
caggagcagc	aggctctttt	gtttgggctt	ttcctgggtca	tgtacttgggt	cactgtgttg	120
gagaacctgc	taatcatcct	ggccattggc	tctgacctgc	acctccacac	cccccatgta	180
cctcttcctg	tccaacctgt	ccttttttga	tattggcttt	atctctacaa	taattcccaa	240
gatgctagat	catattagct	caggaattaa	gctgatttct	tatggggagt	gtctgacaca	300
actctatttc	tctggcctat	ttgcagatct	ggacaacaac	tttctcctgg	ctgtgatggc	360
ccttgaccgc	tatgtggcca	tcagccatcc	tctccattat	gccctaacca	tgaactccca	420
acgctgtgtc	ctgttggtgg	ctgtgtcatg	ggtgatcact	attttacatg	ccctagtgc	480
taccctccta	gtgaccaggc	tttccttctg	tgggtccaaat	attatccctc	acttcttctg	540
tgatctgggc	ccactcctga	agctggcctg	ctccagttact	tgtgtcaatg	atctgggtgct	600
catccttgtg	gcaggaacac	tgctgattgc	gccctttgtc	tgcatcctta	tgctcctactt	660
ttacattgca	ttggccatcc	tgagaattga	ttccccaagg	ggtaagcaaa	gggccttctc	720
cagctgcact	tcccacctct	ctgtagtctc	tctgttctat	agcacagcta	tcgggtgtcta	780
tttatgtcct	ccatcatccc	actcagattg	aaaggacaga	gtcttctcag	tcagtgtacac	840
ggtggtgact	cccatgttga	accccttcat	ctacagcctg	aggaacaggg	atatgaaggg	900
ggcactggga	aaactgcttg	gaataaaaaac	atcctaacac	ccttactcaa	ga	952

<210> 604

<211> 754

<212> DNA

<213> Unknown (H38g453 nucleotide)

<220>

<223> Synthetic construct

<400> 604

catttgtagt	ggtgcgtgtt	cagatacctg	ggtattgtgg	tggagatata	catagtcttt	60
tgaacattcc	gttgtaggtc	gctggtagct	ggatatgtcc	tttaaacttt	tgtggcaatt	120
catttgagaa	gaaacgcagc	tttttctatt	gagttcttat	gctataagta	aaggatgcaa	180
gacattaatt	agacaaaata	aggtaaaatt	ttgtattcgc	ttagagagtt	taagaggcta	240
ttagccacta	gtctctatag	tgcctaagta	aatcgattct	gcttaataaa	ctgctacctg	300
gcttagtaag	taaacaaatt	gaaacttatt	ttaggaaaga	aatatataat	cttatatcta	360
catcagattc	tcttatgtag	aaacactaga	gggtgaatga	ggagttaatg	taagcagcat	420
catatttttg	ctcattcctt	tctctatgat	ttctgcttct	tctgtccaaa	ttctgtgagg	480
tgctcctctag	atgaaattat	cacaggcatg	gaaaagggtca	ttttccactt	ggtccatcct	540
catgattgca	gttgtaacat	actgggactc	attcattttc	acatatgtat	atgagactta	600
aatcatccac	atttcaggcc	agggttaagtt	tctagaaata	ttctatgctt	tccttgcaat	660
tacactcaat	cctgtcgtct	acagcgttgg	cactgacagt	gttctggtgg	caatgaaaaa	720
tatgctctag	agcaacattc	tacataaaaa	aaag			754

<210> 605

<211> 939

<212> DNA

<213> Unknown (H38g454 nucleotide)

<220>

<223> Synthetic construct

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<400> 605
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cgagagctgg agtttttctt gtttgtggtc ttctttgctg tgtatgtage aacagtcctg      120
ggaaatgcac tcattgtggg cactattacc tgtgagtcct gcctacacac tcctatgtac      180
tttctcctgc ggaacaaatc agtcctggac atcgtttttt catctatcac cgtccccaag      240
ttcctgggtg atctttttatc agacaggaaa accatctcct acaatgactg catggcacag      300
atctttttct tccactttgc tgggtggggca gatatttttt tctctctctgt gatggcctat      360
gacagatacc ttgcaatcgc caagcccctg cactatgtga ccatgatgag gaaagagggtg      420
tgggtggcct tgggtgggtg ttcttgggtg agtggtgggt tgcattcaat catccaggta      480
attctgatgc ttccattccc ctctctgtggc cccaacacac tggatgcctt ctactgttat      540
gtgctccagg tggtaaaact ggcctgcact gacacctttg ctttggagct ttcatgatc      600
tctaacaacg gactgggtgac cctgctctgg ttccctcctgc tcttgggctc ctacactgtc      660
attctgggtg tgcctgagatc ccactctggg gagggggcgga acaaggccct ctccacgtgc      720
acgtcccaca tgcctgggtg gactcttcac ttctgtgcct gtgtttacat ctactgccgg      780
cccttcatga cgtgcccac ggacacaacc atatccatta ataacacggt cattaccccc      840
atgctgaacc ccatcatcta ttccctgaga aatcaagaga tgaagtcagc catgcagagg      900
ctgcagagga gacttggggc ttccgagagc agaaaatgg      939

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<210> 606

<211> 927

<212> DNA

<213> Unknown (H38g455 nucleotide)

<220>

<223> Synthetic construct

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<400> 606
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cggcctgagg accaaaagac actctttgtt ctcttctctca tcgtgtacct ggtcaccata      120
acagggaacc tgcctcatcat cctggccatt cgcttcaacc cccatcttca gaccctatg      180
tatttcttct tgagttttct gtctctcact gatatttgct ttacaacaag cgttgtcccc      240
aagatgctga tgaacttctt gtcagaaaag aagaccatct cctatgctgg gtgtctgaca      300
cagatgtatt ttctctatgc cttgggcaac agtgacagct gccttctggc agtcatggcc      360
tttgaccgct atgtggccgt ctgtgacct ttccactatg tcaccaccat gagccaccac      420
cactgtgtcc tgcctgggtg cttctcctgc tcatttcctc acctccactc actcctgcac      480
acacttctgc tgaatcgtct cacttctgt gactccaatg ttatccacca ctttctctgt      540
gacctcagcc ctgtgctgaa attgtcctgc tcttccatat ttgtcaatga aattgtgcag      600
atgacagaag cctgtgtgact tttgggtgact cgttttctct gcattgcttt ctcttatata      660
cgaatcctca ctacagttct caagattccc tctacttctg ggaaacgcaa agccttctcc      720
acctgtgggt tttacctcac cgtgggtgac ctcttttatg gaagcatctt ctgtgtctat      780
ttacagcccc catccacctc cgctgtcaag gaccacgtgg caacaattgt ttacacagtt      840
ttgtcatcca tgcctaatcc ttttatctac agcctgagaa acaaagacct gaaacagggc      900
ctgaggaagc ttatgagcaa gagatcc      927

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<210> 607

<211> 939

<212> DNA

<213> Unknown (H38g456 nucleotide)

<220>

<223> Synthetic construct

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<400> 607
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ctgcggattt tatatgggtg gctcttctca ctgatttacc tggcagccct aatgagtaac      120
cttctcatca ttactctcat taccctggac gtaaagctcc aaacacccat gtacttcttc      180
ctgaagaact tacccttttt ggatgtcttc ctgggtgctg ttccaatccc aaaattcatt      240
gtcaacaacc taaccacaa caattccatt tccattctag gatgtgcctt ccagctactt      300
ttaatgactt ctttctcagc aggagagata tttatctca ctgccatgtc ctatgaccgc      360
tatgtagcca tctgctgtcc cctgaactac gaggtaatca tgaatactgg agtctgtgtg      420

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ttaatggcaa	gtgtttcctg	ggccattgga	gggctctttg	gtactgcgta	cacagctggc	480
acattttcca	tgcctttctg	tggctccagt	gtgattccac	agtttttctg	tgatgttcct	540
tcattactaa	ggatttcctg	ttctgaaaca	ctaattggtaa	tttatgcagg	tattggagtt	600
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ccccatctca	ctgttttcac	tgtttttatc	ataactgctt	attttgttta	tcttaagcca	780
ccttcaaatt	caccatctgt	tattgacagg	ctgctttctg	tgatctacac	tgtgatgcct	840
ccagtattta	accctgtaac	ctacagcctg	cggaacaatg	acatgaaatg	tgctctgata	900
aggttgctgc	agaaaacata	tggtcaggag	gcttacttc			939

<210> 608

<211> 972

<212> DNA

<213> Unknown (H38g457 nucleotide)

<220>

<223> Synthetic construct

<400> 608

atggctgtag	gaaggaacaa	cacaattgtg	acaaaattca	ttctcctggg	actttcagac	60
catcctcaaa	tgaagatttt	ccttttcatg	ttattttctg	ggctctacct	cctgacgttg	120
gcctggaact	taagcctcat	tgccttcatt	aagatggact	ctcacctgca	catgcccatt	180
tacttcttcc	tcagtaacct	gtccttctct	gacatctgct	atgtgtctct	caccgcccct	240
aagatgctgt	ctgacatcat	cacagagcag	aaaaccattt	cctttgttgg	ctgtgccact	300
cagtactttg	tcttctgtgg	gatggggctg	actgaatgct	ttctcctggc	agctatggcc	360
tatgaccggt	atgctgcaat	ctgcaacccc	ttgctttaca	cagtcctcat	atcccatata	420
ccttggttaa	agatgggtgg	tggcgcttat	gtgggtggat	tccttagttc	tttcattgaa	480
acatactctg	tctatcagca	tgatttctgt	gggcccata	tgatcaacca	ccttttctgt	540
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ttggtgatcc	ccgtgggtgaa	tcccatcctc	tacagtttta	ggaataagga	gattaaaaat	900
gccatgagga	aagccatgga	aagggaaccc	gggatttctc	acgggtggacc	attcattttt	960
atgaccttgg	gc					972

<210> 609

<211> 942

<212> DNA

<213> Unknown (H38g458 nucleotide)

<220>

<223> Synthetic construct

<400> 609

atgaccaatc	agacacagat	gatggaattc	ttgcttgtga	gatttactga	gaattgggtg	60
ctcctgaggg	tgcattgctt	gctcttctca	ctgatctacc	tcacggctgt	gctgatgaat	120
ttagtcatca	ttctcctcat	gattctggac	catcgctctc	acatggcaat	gtactttttc	180
ctccgacatt	tgtccttctt	agacctgtgt	ctcatttctg	ccacagtcct	caaatccatc	240
ctcaactctg	tgcctccac	tgactccatc	tccttctctg	gggtgtgtgt	gcagctcttc	300
ttggtgggtac	tgtgtgctgg	atcagagatt	ggcatcctta	ctgccatgtc	ctatgaccgc	360
tatgctgcca	tctgtgtccc	cctacactgt	gaggctgtca	tgagcagagg	gctctgtgtc	420
cagttgatgg	ctctgtctct	gctcaacaga	ggggccttgg	gactcttgta	cacagctgga	480
acattctctc	tgaattttta	tggctctgat	gagctacatc	agttcttctg	cgatgtccct	540
gccctactaa	agctcacttg	ttctaaagaa	catgccatca	ttagtgtcag	tgtggccatt	600
ggggtctgtt	atgcattttc	atgttttagt	tgcattgtag	tttcttatgt	gtacattttc	660
tctgtctgtg	taaggatata	acagagacag	agacaatcca	aagccttttc	caactgtgtg	720
cctcacctca	ttgttgtcac	tgtgtttctt	gtaacagggt	ctgttgcctt	tttaaagcca	780
gggtctgatg	caccttctat	tctagacttg	ctgggtgtctg	tgttctatct	tgtcgcacct	840
ccaaccttga	accctgttat	ctactgtctg	aagaacaagg	acattaaatc	cgctctgagt	900

aaagtctctgt ggaatgttag aagcagtggg gtaatgaaaa ga

942

<210> 610

<211> 921

<212> DNA

<213> Unknown (H38g459 nucleotide)

<220>

<223> Synthetic construct

<400> 610

atgaatcaca	gcggttgtaac	tgagttcatt	attctggggc	tcaccaaaaa	gcctgaactc	60
caggaatta	tcttcctctt	ttttctcatt	gtctatcttg	tggtttttct	cggaacatg	120
ctcatcatca	ttgcaaaaat	ctataacaac	accttgcata	cgcccatgta	tgttttcctt	180
ctgacactgg	ctgttggtga	catcatctgc	acaacaagca	tcataaccgaa	gatgctgggg	240
accatgctaa	catcagaaaa	taccatttca	tatgcaggct	gcatgtccca	gctcttcttg	300
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gtggccattt	gtttccctct	tcattacagt	actgttatga	accaccatat	gtgtgtagcc	420
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atgaggttga	ctttctgtgg	gccaaacacc	attgaccact	tcttctgtga	gataccccc	540
ttgctggctt	tgctctgtag	ccctgtaaga	atcaatgagg	tgatggtgta	tggtgctgat	600
attaccctgg	ccatagggga	ctttattctt	acctgcattc	cctatgggtt	tatcattggt	660
gctattctcc	gtatccgcac	agtagaaggc	aagaggaagg	ccttctcaac	atgctcatct	720
catctcacag	tggtgaccct	ttactattct	cctgtaattc	acacctatat	ccgccctgct	780
tccagctata	catttgaaag	agacaagggt	gtagctgcac	tctatactct	tgtagctccc	840
acattaaacc	cgatgggtga	cagcttccag	aatagggaga	tgagggcagg	aattaggaag	900
gtgtttgcat	ttctgaaaca	c				921

<210> 611

<211> 810

<212> DNA

<213> Unknown (H38g460 nucleotide)

<220>

<223> Synthetic construct

<400> 611

atggaagtga	gtgggaacca	cacctctgtg	gccatgtttg	ttctcctagg	actctcagat	60
gaaaaagagc	tcagctcat	cctctttcca	gtcttctctg	tgatctacct	tgtagccctg	120
atttggaaaca	tggtcttat	catcctcatc	agaatagact	ctcatctgaa	cacacccatg	180
tacttttttc	tcagtttctt	ctcattttaca	gacatctgct	attcttctac	catcagccca	240
aggatgcttt	cagacttctt	aaaagataag	aagacaattt	ccttcccttg	ctgtgccact	300
cagtattttc	ttggggcctg	gatgagtctg	gctgagtgtc	gcctcttggt	catcatggcc	360
tgtgacagat	atgtggccat	tggcagcccc	ctgcagtact	cagcaatcat	ggtccctagt	420
atctgttgga	agatggtagc	tggagtctgt	gggggtggat	tccttagtag	cttagttcat	480
acagtcctct	gctttaatct	ctactactgt	gggcaaaata	tcattcaaca	tttcttctgt	540
aacacacttc	agattatttc	cttgtcttgc	tccaaccctt	ttatcagcca	aatgattctt	600
tttctggaag	ctatttttgt	tgggttgggc	tctttgcttg	ttatcccttt	gtcttatggg	660
ttcattgtag	cttccatact	gaaaatatca	tcaaccaa	gttgtgccaa	ggccttcaat	720
acctgtgect	cccacctggc	agctgtggct	ctcttctatg	gcacagccct	ttctgtgtac	780
atgcatecta	gctctagcca	ctccatgaag				810

<210> 612

<211> 988

<212> DNA

<213> Unknown (H38g461 nucleotide)

<220>

<223> Synthetic construct

<400> 612

tactccaaag	aaattataga	ataatgtact	tccaatgata	ttataaaatg	tgggttagcat	60
aataagatta	ctttttttac	tgttttatcct	tttagagttc	acagaagatt	tgggggttaca	120
gcaagtgtc	tttttcatct	ttctcatcat	ttatgtcatc	agcctctcag	gcaacatcat	180
tctgaattct	ctcatctgtg	ctgattcttg	gccctacaca	cccatgtatt	tcttctactgg	240
aaaccgggtc	cttctggatc	tctgggtatc	ctctgtccac	atccccgata	tcctgctgac	300
ttgcatttct	gatgacaaaa	ccatctcctt	tcctggctgc	cttgctcagt	tcttctctgc	360
tgtgttgcc	taaaatgagt	gctatatgat	ggcttccatg	gcttatgacc	gctacatggc	420
aatctccaag	cccctgcttt	attccccggc	cacattccca	gagttatgtg	ccagtcttgt	480
tgaggcttca	caccttggcg	gctttgtaaa	ctcaaccatc	atcaccagtg	agacacctac	540
cttgagcttc	tgtggcagca	atatcattga	tgatttcttc	tgtgatctgc	ccccacttgt	600
aaagttgggtg	tgtgatgtga	aggagcgcta	ccaggctgtg	ctgcatttta	tgcttgccctc	660
caatcatcac	tcccactgca	cttattcttg	cgtccatctc	ttcatcattg	cagccatctc	720
gaagatccgt	tccattaagg	gccgcctcca	ggcttctctc	acttggtgggt	ctcccctgac	780
ggctctcacc	ttgtactatg	gtgcaatctt	ctttatttac	tcccaaccaa	gaactagcta	840
tgcccttaaaa	atggataaat	tggggctcagt	gttctatact	gtgggtgattc	caatgctaaa	900
cccccttgatc	tatagcttaa	gaaataagga	tgtcaaagat	gccttgaaga	aaatgttaga	960
tagacttcag	tttcttaag	aaaaatat				988

<210> 613

<211> 1049

<212> DNA

<213> Unknown (H38g462 nucleotide)

<220>

<223> Synthetic construct

<400> 613

atggagcaga	gcaattatcc	cgtgtatgcc	gactttatcc	ttctgggttt	gttcagcaac	60
gcccgtttcc	cctggcttct	ttgccctcat	tctcctggtc	tttgtgacct	ccatagccag	120
caacgtggtc	aagatcattc	tcateccacat	agactcccgc	ctccacaccc	ccatgtactt	180
cctgctcagc	cagctctccc	tcagggacat	cttgatatatt	tccaccattg	tgcccaaaat	240
gctgggtcgac	caggtgatga	gccagagagc	catttccttt	gcaggatgca	ctgcccaca	300
cttccctctac	ttgaccttag	caggggctga	gttcttcttc	ctaggactca	tgctctgtga	360
tcgctacgta	gccatctgca	accctctgca	ctatcctgac	ctcatgagcc	gcaagatctg	420
ctggttgatt	gtggcggcag	cctggctggg	agggtctatc	aatggtttct	tgctcacccc	480
cgtcaccacg	cagttccctt	tctgtgcctc	tcgggagatc	aaccacttct	tctgcgaggt	540
gcctgccctt	ctgaagctct	cctgcacgga	cacatcagcc	tatgagacag	ccatgtatgt	600
ctgctgtatt	atgatgctcc	tcateccctt	ctctgtgatc	tcgggctctt	acacaagaat	660
tctcattact	gtttatagga	tgagcagaggc	agaggggagg	cgaaaggctg	tggccacctg	720
ctcctcacac	atgggtggtg	tcagcctctt	ctatggggct	gccatgtaca	catactgtct	780
gcctcattct	taccacaccc	ctgagcagga	caaagctgta	tctgccttct	acaccatcct	840
cactcccatg	ctcaatccac	tcattttacag	ccttaggaac	aaggatgtca	cggggggcct	900
acagaagggt	gttgggaggt	gtgtgtcctc	aggaaaggta	accactttct	aaacaaattg	960
catatgctgc	tagagacttg	aaatgaagga	tacaagactt	tatcattgcc	cttgagttaa	1020
aatattctct	gcctggaac	aagtgaccc				1049

<210> 614

<211> 957

<212> DNA

<213> Unknown (H38g463 nucleotide)

<220>

<223> Synthetic construct

<400> 614

atgggtgttc	acaatttggt	cacgggtgact	cagtttatcc	ttatagggtc	ctcttacttc	60
tccaatgagc	actaccttct	ttttgtggcc	cttgccatta	tctgtcaggt	gttcttgggtg	120
cgaagtggag	acattctctt	ggccattggg	actgtgatta	agttgcacac	tactcatgta	180
ttattttttg	gcaaatgtgt	ccatcttaga	catattgtgt	tcacagcta	ctatacctaa	240
gatgcctaag	attctctaga	ctgaggatca	cagcatttct	tttggttaggt	gagctttgca	300
gccctatttc	ctagtggcct	gggctgggaa	gaaagcttcc	tcactgttac	ggcttatgac	360

tggtgtgtgg	tcacatgttt	ctccctttgt	tacatcctga	tcatgaacaa	attggctctg	420
tccagctggg	ttatgggacc	tgagcagctg	ggtttctaaa	tttctcctc	ctccacgtag	480
tgtctaccct	ctgctgtct	ttctgcaagc	ctgatcgagt	taaccagtat	tactgtgata	540
tctcaccgat	gggggccctg	ttgtgccagt	ccatgcacct	ggcaaaccatg	cttgttttag	600
eggaatcagt	tatcttgggg	atcagtgtct	ttctggctgc	ctttaacttt	tacatatata	660
tcatctccac	tatcctaaag	atccagtgtg	tagagtggag	tgcaaagtgc	ttctctacat	720
gcacttccca	cctccttacg	gtctgtttgt	tctatggcat	attgacattt	acctacattt	780
actccttctc	cagtcaaacac	tcacatgtct	aaggcaagcc	cagatctagc	cacagacagg	840
ctcatctcta	tgctatacag	agttattacc	ctgatgttta	acttcatcac	tgacaacctg	900
agaaacacag	aggtaaaagg	agcctcagaa	aggttttatg	tcattgaaca	tgtttat	957

<210> 615

<211> 840

<212> DNA

<213> Unknown (H38g464 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(840)

<223> n = A,T,C or G

<400> 615

atgtacctga	ccacgggtgct	ggggaacctg	ctcatcatgc	tgtcatcca	gctggactct	60
caccttcaca	cccccatgta	cttcttctc	agccacttgg	ctctcaactta	tttttctttt	120
tcatctgtca	ctgtccctaa	gatgctgatg	gacatgcgga	ctaagtacaa	atcgatcctc	180
tatgaggaat	gcatttctca	gatgtatttt	tttatatttt	ttactgacct	ggacagcttc	240
cttattacat	caatggcata	tgaccgatat	gttgccatat	gtcaccctct	ccactacact	300
gtcatcatga	gggaagagct	ctgtgtcttc	ttagtggctg	tatcttggat	tctgtcttgt	360
gccagctccc	tctctcacac	ccttctcctg	accgggctgt	ctttctgtgc	tgcgaaacac	420
atcccccatg	tcttctgtga	ccttgtctgc	ctgctcaagc	tgctctgtct	agatatcttc	480
ctcaatgagc	tggtcatggt	cacagtaggg	gtggtgggtca	ttaccctgcc	attcatgtgt	540
atcctgggtat	catatggcta	cattggggcc	accatctcta	gggtcccttc	aaccaaagg	600
atccacaaag	cattgtccac	atgtggctcc	catctctctg	tggtgtctct	ctattatggg	660
tcaatatttg	gccagtacct	tttccgact	gtaagcagtt	ctattgacaa	ggatgtcatt	720
gtggctctca	tgtacacgg	ggtcacaccc	atgttgaacc	cctttatcta	cngcattngg	780
aacagggaca	tgaaagaggc	ccttgggaaa	ctcttcagta	gagcaacatt	tttctcttgg	840

<210> 616

<211> 909

<212> DNA

<213> Unknown (H38g465 nucleotide)

<220>

<223> Synthetic construct

<400> 616

atgaattcat	caagtgactg	aagacaacca	gtgatggacg	gggtgaatga	tagctccttg	60
cagggctttg	ttctgatggg	catatcagac	catccccagc	tggagatgat	cttttttata	120
gccatcctct	tctcctattt	gctgacccta	cttgggaact	caaccatcat	cttgctttcc	180
cgcttgagg	cccggctcca	tacacccatg	tacttcttcc	tcagcaacct	ctcctccttg	240
gaccttgctt	tcgctactag	ttcagtcctc	caaagtctga	tcaatttatg	gggaccaggc	300
aagaccatca	gctatgggtg	ctgcataacc	cagctctatg	tcttctcttg	gctggggggc	360
accgagtga	tctgtctggt	ggtgatggca	tttgaccgct	acgtggcagt	gtgccggccc	420
ctccgctaca	ccgcatcat	gaacccccag	ctctgtctgc	tgttggtgtg	gattgcctgc	480
ctgggtggct	tgggcaactc	tgtgatccag	tcaacattca	ctctgcagct	cccattgtgt	540
gggcaccgga	gggtggagg	attcctctgc	gaggtgcctg	ccatgatcaa	actggcctgt	600
ggcgacacaa	gtctcaacca	ggctgtgtct	aatgggtgtc	gcaccttctt	cactgcagtc	660
ccactaagca	tcacgtgat	ctcctactgc	ctcattgtct	aggcagtgct	gaaaatccgc	720
tctgcagagg	ggaggcgaaa	ggcgttcaat	acgtgcctct	cccatctgct	ggtgggtgtc	780

ctcttctatg	gctcagccag	ctatgggtat	ctgcttccgg	ccaagaacag	caaacaggac	840
cagggcaagt	tcatttccct	gttctactcg	ttgggtcacac	ccatgggtgaa	ccccctcatc	900
tacacgctg						909

<210> 617

<211> 926

<212> DNA

<213> Unknown (H38g466 nucleotide)

<220>

<223> Synthetic construct

<400> 617

atgcagagga	gcaatcacac	agtgactgag	ttcatcctgc	tgggcttcac	cacagatcca	60
gggatgcaac	tgggcctctt	tgtgggtgtc	ctgggtgtgt	actgtctgac	tgtggtagga	120
agtagcacc	tcacgtgtt	gatctgta	gactcccacc	tacacacacc	catgtatttt	180
gtcattggaa	atctgtcatt	tctggatctc	tgggtattctt	ctgtctacac	cccaaagatc	240
ctagtgtac	gcattctctga	agacaaaagc	atctcctttg	ctggctgcct	gtgtcagttc	300
ttctctgcc	ggctggccta	tagtgagtgc	tacctactgg	ctgccatggc	ttatgaccac	360
tacgtggcca	tctccaagcc	cctgctttat	gctcagacca	tgccaaggag	attgtgcac	420
tgtttgggtt	tatattccta	tactgggggt	tttgtcaatg	caataatatt	aaccagcaac	480
acattcacat	tggatttttg	tgggtgaca	gtcattgatg	actttttctg	tgatgtccca	540
ccccctcgt	agctggcatg	cagtgtgaga	gctaccaggc	tgtgtctgc	ttccttctgg	600
cctccaatgt	catctccctt	actgtgctca	tccttgccctc	ttacctctcc	atcatcacca	660
ccatcctgag	gatccactct	acccagggcc	gcatacaagt	cttctccaca	tgtctctccc	720
acctgatctc	cgttacctta	tactatggct	ccattctcta	caactactcc	cggccaagtt	780
ccagctactc	cctcaagagg	gacaaaatgg	tttctacctt	ttatactatg	ctgttcccca	840
tgttgaatcc	catgatctac	agctctgagg	ataaagacat	gaaagacgct	ctgaaaaaat	900
tcttcaagtc	agcataatcc	aaagtc				926

<210> 618

<211> 936

<212> DNA

<213> Unknown (H38g467 nucleotide)

<220>

<223> Synthetic construct

<400> 618

atggacgggg	tgaatgatag	ctccttgacg	ggctttgttc	tgatgagcat	atcggaccat	60
ccccagctgg	agatgatctt	ttttatagcc	atcctcttct	cctatttgct	gaccctactt	120
gggaactcaa	ccatcatctt	gctttcccg	ctggaggccc	ggctccatac	acccatgtac	180
ttcttccctc	gcaacctctc	ctccttgac	cttgctttcg	ctactagtcc	agtcgcccaa	240
atgctgatca	atttatgggg	accaggcaag	accatcagct	atgggtggctg	cataaccagg	300
ctctatgtct	tcctttggct	ggggggccac	gagtgcaccc	tgtgtgtgtg	gatggcattt	360
gaccgctacg	tggcagtgtg	ccggcccttc	cgctacaccg	ccatcatgaa	ccccagctc	420
tgtgtgtgtc	tggctgtgat	tgcctggctg	ggtggcttgg	gcaactctgt	gaccagtc	480
acattcactc	tgcagctccc	attgtgtggg	caccggaggg	tggagggtt	cctctgcgag	540
gtgcctgcc	tgatcaaaact	ggcctgtggc	gacacgagtc	tcaaccaggc	tgtgtcaat	600
ggtgtctgca	ccttcttcac	tgcagtccca	ctaagcatca	tcgtgatctc	ctactgcctc	660
attgtctcag	cagtgtcgaa	aatccactct	gcagagggga	ggcgaaaggc	gttcaatcag	720
tgcctctccc	atctgctggg	ggtgttcttc	ttctatggct	cagccagcta	tgggtatctg	780
cttccggcca	agaacagcaa	acaggaccag	ggcaagttca	tttccctgtt	ctactcgttg	840
gtcacaccca	tgttgaatcc	cctcatctac	acgtctcgga	acatggaagt	gaagggcgca	900
ctgaggagg	tgtgtgggaa	aggaagagaa	gttggc			936

<210> 619

<211> 247

<212> DNA

<213> Unknown (H38g468 nucleotide)

<220>

<223> Synthetic construct

<400> 619

ggtgagaggc	ttaagacact	caacacatgt	gtgtcacata	tctatgcagt	gctgatcttc	60
tatgtgcta	tggtagtgt	gtccatgggt	catcgatttg	ggaggcatgc	tcctgaatat	120
gtgcacaagt	tcatgtctct	ttgtacctcc	aatgctctac	ccaattatct	attccatcaa	180
gactaaggag	attcgcagga	gactacacaa	gatgttattg	ggagctaagt	tctgatcaag	240
gaaaact						247

<210> 620

<211> 936

<212> DNA

<213> Unknown (H38g469 nucleotide)

<220>

<223> Synthetic construct

<400> 620

atggaagtgg	gaaattgcac	catcctgact	gaattcatct	tgttgggttt	ctcagcagat	60
tcacagtggc	agccgattct	atttggagtg	tttctgatgc	tctatttgat	aaccttgtea	120
ggaaacatga	ccttgggtat	cttaatccga	actgattccc	acttgcatac	acctatgtac	180
tttttcattg	gcaatctgtc	ttttttggat	ttctgggtata	cctctgtgta	tacccccaaa	240
atcctggcca	gttgtgtctc	agaagataag	cgcatttccct	tggctggatg	tggggctcag	300
ctgttttttt	cctgtgttgt	agcctacact	gaatgctatc	tcctggcagc	catggcatat	360
gaccgcatatg	cagcaatttg	taaccatttg	ctttattcag	gtaccatgtc	caccgcccctc	420
tgtactgggc	ttgttgctgg	ctcctacata	ggaggatttt	tgaatgccat	agcccatact	480
gccaatacat	tccgcctgca	tttttgggt	aaaaatatca	ttgaccactt	tttctgtgat	540
gcaccaccat	tggtaaaaat	gtcctgtaca	aacaccaggg	tctacgaaaa	agtctgtgctt	600
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tgtgcttccc	acctcatctc	agtcagtctc	ttctatggat	cattgttggt	tatgtattca	780
aggcctagtt	ccacctactc	cctagagagg	gacaaagtag	ctgctctggt	ctacaccgtg	840
atcaaccacac	tgtcaacccc	tctcatctat	agcctgagaa	acaaagatat	caaagaggcc	900
ttcaggaaag	caacacagac	tatacaacca	caaaca			936

<210> 621

<211> 954

<212> DNA

<213> Unknown (H38g470 nucleotide)

<220>

<223> Synthetic construct

<400> 621

atgcctactg	taaaccacag	tggcactage	cacacagtct	tccacttgct	gggcateccct	60
ggcctacagg	accagcacat	gtggatttct	atcccattct	tcatttccta	tgtcaccgcc	120
cttcttggga	acagcctgct	catcttcatt	atcctcacia	agcgcagcct	ccatgaaccc	180
atgtacctct	tcctctgcat	gctggctgga	gcagacattg	tcctctccac	gtgcaccatt	240
cctcaggcct	tagctatctt	ctgggtccgt	gctggggaca	tctccctgga	tcgttgcatc	300
actcagctct	tcttcattca	ttccaccttc	atctctgagt	cagggatctt	gctgggtgatg	360
gcctttgacc	actatattgc	catatgctac	ccactgaggt	acaccaccat	tcttaciaaat	420
gctctgatca	agaaaatttg	tgtgactgtc	tctctgagaa	gttatggtag	aattttccct	480
atcatatttc	ttttaaaaag	attgactttc	tgccagaata	atattattcc	acacaccttt	540
tgtgaacaca	ttggcctagc	caaatatgca	tgtaatgaca	ttcgaataaa	catttggtat	600
gggtttttcca	ttctaattgtc	gacgggtggtc	ttagatgttg	tactaatttt	tatttcctat	660
atgctgattc	tcctatgctgt	cttccacatg	ccttctccag	atgcttgcca	caaagctctc	720
aacacatttg	gtctccatgt	ctgcacatc	atctcttttt	atgggtctgg	catcttcaca	780
atccttacc	agaggttttg	acgccacatt	ccaccttgta	tcacatccc	gttggtcaat	840
gtctgcattc	tggctccacc	tatgctgaat	cccattattt	atgggatcaa	aaccaagcaa	900
atccaggaac	aggtggttca	gtttttgttt	ataaaacaga	aaataacttt	gggt	954

<210> 622
 <211> 942
 <212> DNA
 <213> Unknown (H38g471 nucleotide)

<220>
 <223> Synthetic construct

<400> 622
 atggaggctg ccaatgagtc ttcagagggga atctcattcg ttttattggg actgacaaca 60
 agtcctggac agcagcggcc tctctttgtg ctgttcttgc tcttgtatgt ggccagcctc 120
 ctgggtaatg gactcattgt ggctgccatc caggccagtc cagcccttca tgcacccatg 180
 tacttcctgc tggcccacct gtcctttgct gacctctgtt tcgcctccgt cactgtgccc 240
 aagatgttgg ccaacttggt ggcccatgac cactccatct cgctggctgg ctgctgacc 300
 caaatgtact tcttctttgc cctgggggta actgatagct gtcttctggc ggccatggcc 360
 tatgactgct acgtggccat ccggcacccc ctcccctatg ccacgaggat gtcccgggcc 420
 atgtgcgcag ccctgggtggg aatggcatgg ctgggtgtccc acgtccactc cctcctgtat 480
 atcctgctca tggctcgctt gtccttctgt gcttcccacc aagtgcacca cttcttctgt 540
 gaccaccagc ctctcttaag gctctcgtgc tctgacaccc accacatcca gctgctcatc 600
 ttcaccgagg gcgcccaggt ggtggtcact ccttctctgc tcacctcgc ctcctatggg 660
 gccatcgtag ctgcccgtgt ccagctgccc tcagcctctg ggaggtccg ggctgtgtcc 720
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 ttccaggcca catcccagc cgaggcagag tggggccgtg tggccactgt catgtacact 840
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 gcaactccgag cccttctcat tgggcgaagg atctcagcta gt 942

<210> 623
 <211> 946
 <212> DNA
 <213> Unknown (H38g472 nucleotide)

<220>
 <223> Synthetic construct

<400> 623
 atctctatgt tctcctgcaa caccagcact tctggtcagt ctaccttct cctcactggg 60
 tttccaggcc tggagccctc tcattcattgg gtttccatcc ccatcaacct cttctgtgtg 120
 gtttccatcc tgggtaataa tatcatctc ttcctgatcc acacagatcc agccttacat 180
 gaacccatgt atatcttctt gtccatgttg gcagcctctg atctgggctt ctgtgctctt 240
 accttcccc cctatgggtgc tctcttctgg ctgggagctc gtgagctgcc ctttgatctc 300
 tgtgcagcac agatgttctt catccatacc ttcacctatg tggagtcagg tgtactgctg 360
 gccatggcct tcgatcgctt tattgccatc cgggaccctc tgcattatgc cataatcatt 420
 acctgctcag tcacagccga ggtgggaact gccattctgg tgagggtgt tctgctcaac 480
 ctcccgggac ctatcctcct gcagcagctg ctctttccca agatcagcgc tctctgtcac 540
 tgctactgcc tgcactgtga ccttgtgggg ttggcctgct cagacacca gatcaatagc 600
 ctggttggcc tggtttccat cctcttctca ctgtgccttg actccttct catcatgctt 660
 tcatatgccc tgatcctatg aactgtgctg ggcattgcat cactggggga gcggctcaag 720
 gcaactcaaca cgtgtgtctc acacctctgc attgttctca tcttttattt gcccacacgg 780
 gctgtctgtc ttgcaccgag taaagaagca tgactacct gctctggcag tgcctatggc 840
 caacctacac ttcttgggtc cacccttcat gaacccatt gtgtattgca tcaagtctag 900
 gcagatccgt cagagcctcc taaagcactt ccagcagaag aggatt 946

<210> 624
 <211> 960
 <212> DNA
 <213> Unknown (H38g473 nucleotide)

<220>
 <223> Synthetic construct

<400> 624

cacacagagc	catggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcccgt	cctcgtctgg	ttgtcccgtt	ccatgtatct	ggtcacagtg	120
ctgaggaacc	tgctcatcat	cctgggtgtc	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcacctcggc	catgggtccc	240
aagatgattg	tggacatgca	gtctcatagc	agagtcactc	cttatgctgg	ctgcctgaca	300
cggatgtctt	tcttgggtcc	ttttgcatgt	atagaagaca	tgctcctgac	tgcatgggcc	360
tatgactgct	ttgtagccat	ctgtcgccct	ctgcactacc	cagtcactgt	gaatcctcac	420
ctctctgtct	tcttagtttt	gggtgccttt	ttccttagcc	tggtggattc	ccagctgcac	480
agttagattg	tgttacaatt	caccttcttc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	agcttctcaa	ccttgccctg	tctgacagcg	tcatcaatag	catattctta	600
tatttgcata	gtactatggt	tggttttctt	cccatttcaa	ggatcctttt	gtcttactat	660
aaaattgtcc	cctctattct	aaggatttca	tcgtcagatg	ggaagtataa	agccttctcc	720
acctgtggct	ctcacctggc	agttgtttgc	ttattttatg	gaacaggcat	tggcgtgtac	780
ctgacttcag	ctgtgtcacc	accccccagg	agtggtgtgg	tggcgtcagt	gatgtacgct	840
gtggtcacc	ccatgctgaa	ccctttcatc	tatagcctga	gaaacagaga	cattcaaagc	900
gccctctgga	ggctgcgcag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 625

<211> 985

<212> DNA

<213> Unknown (H38g474 nucleotide)

<220>

<223> Synthetic construct

<400> 625

atgaaactca	taaaccatac	catcagaacc	caacctcctt	tctgtctcatg	ggaattccag	60
gcccgagggc	atcccacttt	tggattgctt	ttcccttctg	ctccatgtat	gccctggcag	120
tgctgggaaa	catgggtggtg	ctgctagtgg	tacattcaga	gcctgtattg	caccagccca	180
tgtacctgtt	cctctgcatg	ctatccacca	ttgacctggt	cctctgcacc	tccactgtgc	240
ccaagctcct	tgcacttttt	tgggcaaagg	atgctgagat	caactttggg	gcctgtgctg	300
ccagatggtt	ctttatccat	ggcttctcag	ctgtagaatc	tgggtatactg	ctagcaatgg	360
cctttgaccg	ctacttagcc	atttgcctgg	ctctgcacta	tgggtcattg	ctctccccag	420
agtctgtagg	caagctgggg	gctgcagcgt	gcttcgtggt	ttgggactca	tgaccccaact	480
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cactgtctgc	acactgggtg	tgggcaactg	ctccatctgt	attgctgtct	cctatgtact	660
catcctccga	gctgtgttag	gtctttcttc	caaggaggca	agggctaaga	cctttggcac	720
ttgtggctcc	cacctgggtg	tcatacttct	cttctacaca	ccaggactct	tctccttcta	780
cacacagcgg	tttggccagc	acgtgccccg	gcacatccac	atccttctag	ctgacctcta	840
cctggttggtg	ccacccatgc	tcaaccccat	catctatggc	atgaagacca	aacagatctg	900
ggatggggcc	ctcgggcttc	tgaagtgggg	ccctgctcag	tcataaagtc	ttcaacccca	960
ccctgaaacc	tttatcttct	ttgcc				985

<210> 626

<211> 989

<212> DNA

<213> Unknown (H38g475 nucleotide)

<220>

<223> Synthetic construct

<400> 626

cacacagagc	cacggcatct	cacaggtgtg	tgagaattcc	tcctcgtggg	actctcagag	60
gatccagaac	tgcagcctgt	cctcgggtgg	gtgtccctgt	ccatgtatgg	ggtcacagtg	120
ataaggaacg	tgctcatcat	cctgggtgtg	agctctgact	cccacctcca	cacccccatg	180
tttttttctc	ctccaacgtg	tgggtgggctg	acatcagttt	cacgtcgggc	ggggttccca	240
agatgacggg	ggacatgcag	tcgcatagca	gagtcactta	ttatgctggg	tgcatgactc	300
ggatgtcttt	tttcgtcctt	ttagcatgta	tagaagacat	gctcgtgtgt	gtgatggcat	360
aggagtgtct	tgtagccatg	tgtcgccctg	tgcaatacac	agttattgta	aatcctcacc	420

tgtgtgtttt	cagagttggg	gtgtcctttc	tccagagcgt	gttgtattcc	caggtgcaca	480
gataagagtgt	gtcacaattc	acttttttca	agaatgtgga	aatctctcat	tttgtgtgtg	540
agccatctca	atttctccac	tttgogtgtt	gtgacagttt	catcaagagc	atattcatgt	600
atttcgatag	taatatgttt	ggttttcttc	ccatcacagg	gatctttttg	tcttaatata	660
aaagtgtccc	ctccattata	aggatttcat	cgtcagatgg	aaagtataaa	gctttctcca	720
cgtgtggctc	tcacgtggca	gttgtttgct	tattatatgg	aacaggcatt	ggggtgtaca	780
tgacttcagg	tgtggcacca	ccccccagca	atgggtgtgg	ggcatcagtg	aagtacgcgg	840
tggtcacccc	catgctgacc	cctttcatct	acagcgtgag	aaacagggac	attcaaagcc	900
ccctgtggag	tgtgtgcagc	agcacagtta	aatcttttga	tgtgtcccat	cttttttgtg	960
tgtgggtaag	aaagggcacc	cacattaaa				989

<210> 627

<211> 512

<212> DNA

<213> Unknown (H38g476 nucleotide)

<220>

<223> Synthetic construct

<400> 627

cacacacagc	cacggggtct	cacacgtgtg	tgagaattcc	tcctcctggg	actctcacag	60
gatccacaac	tgcagctgtg	ctctctgggc	tgccctgtg	catgtgtctg	ggcacacagc	120
tggggaacct	gctgcatcat	cctgggtgtg	agctctgact	cccacctcca	caccccatg	180
tactcttttc	tctccaacct	gtgctggggc	tgacatcagt	ttcacctcca	ccacggggcc	240
caagttgatt	gtggacatcc	actcttacac	cagagacatc	tcctatgcac	gctgtctgac	300
tcacacacct	ctcttttgcca	tttttgagg	cgtgggaaag	agacatgctc	ctgagagtga	360
tgggctatga	ccgcgttgta	gacatctgtg	acctctata	tcattcacac	gccatgaacc	420
cctgtgtctg	tggctctcta	gatttgggt	ctctttttt	tctcacactt	ttatacacc	480
acctgcacaa	ctcgattgcc	ttacacatga	cc			512

<210> 628

<211> 967

<212> DNA

<213> Unknown (H38g477 nucleotide)

<220>

<223> Synthetic construct

<400> 628

atgaatgaga	caaatcattc	ttgggtgaca	gaatttgtgt	tgctgggact	gtctagtcca	60
aggagctcc	aacctttctt	gtttcttata	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcacatcctt	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	ccaacctgtc	atztatagac	gtatgtgttg	cctcttctgc	taccctctaa	240
atgattgcag	actttctggt	tgagcacaag	actatttctt	ttgatgcccg	cctggccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtc	tcctagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctccc	cactacatga	caatcatgag	ctgctgtgta	420
tgtgttgtgc	tcttcctcat	ttcctgggtt	gtgggcttca	tccataccac	cagccagttg	480
gcattcactg	ttaatctgcc	attttgggtt	cctaataagg	tagatagtgt	ttttctgtga	540
ccttcctcta	gtgaccaagt	tagcctgcat	agacacttat	gttgtcagcc	tactaatagt	600
tgacagatagt	ggctttcttt	ctctgagttc	ctttctcttc	ttggttgtct	cctacactgt	660
aatacttggt	acagtttagga	atagctcttc	tgtaagcatg	gtgaaggcct	gctccacatt	720
gactgctcac	atcactgtgg	tcactttatt	ctttggaccg	tgtattttca	tctatgtgtg	780
gcccttcagc	agttactcag	ttgacaaagt	ccttgctgta	ttctacacca	tcttcacgtc	840
tattttaaac	cctgtaatct	acatgctaag	aaacaaagaa	gtgaaggcag	ctatgtcaaa	900
actgaagagt	cgttatcaga	agcttgggtc	ggtttctgta	gtcataagaa	acgttctttt	960
cctagaa						967

<210> 629

<211> 942

<212> DNA

<213> Unknown (H38g478 nucleotide)

<220>

<223> Synthetic construct

<400> 629

atggaggggt	ttaaactattc	cagagtatct	gaattcatgt	tacttggact	tactgattct	60
cctgaactcc	agatattctt	ttttgtgggtg	ttttctgtct	tctatttaat	gaccatgttg	120
ggcaactgcc	tgattttact	caactgtccta	tccacctcac	accttccactc	tcgcacgtac	180
ttcctgctca	gcaacctgtc	tcattgacat	gtgcctgtcc	tccttttgcca	caccaaagat	240
gattatggac	ttttttgtctc	tgcgtaagac	catctctttt	gaaggctgca	tttctcagat	300
ctttttttta	cacctcttca	atgggactga	gattgtgctg	ctgatctcca	tgtcttttga	360
caggtatatt	gccatatgta	aacctctccg	ctattcaaca	attatgagcc	aaagagtgtg	420
tgttgagctt	gtggcagttt	cttgttggac	agtgggcttt	ctacatacaa	tgagccaatt	480
agtttttccc	tctatttgcc	cttctgtgtt	cccaatgttg	tagacagttt	tttctgtgat	540
cttcctttgg	tcattccagt	agcttgtata	gatatttatg	ttcttgggac	ctccatgatt	600
tcaaccagtg	gtgtgactgc	tcttacaagt	tttctgcttt	tgtccacctc	ctacatcatt	660
gttcttaata	ctatcagggg	ctactcctcc	acaggatcct	ccaaggctct	ttctacctgt	720
acagcacatt	ttattgttgt	gttaatgttc	tttggccct	gtattttcat	ttatgtgtgg	780
ccttcacaaa	acttccctgt	agacaaaatt	ctctctgttt	tctataccat	cttccactccc	840
tttctgaatc	cacttatcta	tactttgaga	aaccaggaag	tgaagacagc	aatgaagaag	900
aaactgaata	ttcagtattt	cagtcttggg	aaaactgtct	cg		942

<210> 630

<211> 595

<212> DNA

<213> Unknown (H38g479 nucleotide)

<220>

<223> Synthetic construct

<400> 630

atgaaccctg	gtttgtgtgg	cttttagagtt	gtgggtgtctt	ttttttttca	cagtctttta	60
ggcgacacag	tgacacaact	gagcgccctca	caaatgacgt	gtttcgagta	tgtggaaatt	120
cataatttct	tgtgtgccct	ttctcaactc	ccccatcgtg	catgggtgtga	cactttcccc	180
aataacataa	tcgtgtattt	tcctgctgcc	atatttggtt	ttcttcccat	cgcggggacc	240
ccttttctct	taatatgaaa	gtgtttcctc	cattgagagg	gtttcatcat	aagggtggaga	300
gtataaggct	ttccccacgt	gtgggtctca	cctctcagtc	gtttgctgat	tatatggcac	360
aggcgttggg	gggcacctca	gttcagatgt	gtcatcttcc	ccgagaaagt	ctgcgggtggc	420
ctcagtgtat	tacactgtgg	tcacccccat	gctgaaccct	ttcatctaca	gcatgagaaa	480
cagggatact	aaaagtgtcc	tgcgggcgcc	gcacggcagc	acgggtgtaat	tttgatatct	540
tcttatctgt	cccatctcct	ttgtagtgtg	ggttaaaaaa	ggcagaaagg	tcaaa	595

<210> 631

<211> 942

<212> DNA

<213> Unknown (H38g480 nucleotide)

<220>

<223> Synthetic construct

<400> 631

atgctgggtc	tcaatggcac	ccccttccag	ccagcaacac	tccagctgac	aggcattcct	60
gggatacaaa	caggcctcac	ctgggttgcc	ctgattttct	gcacccctca	catgatctcc	120
attgtaggta	acctcagcat	tctcactctg	gtgttttggg	agcctgctct	gcacagccc	180
atgtactact	tcctctctat	gctcgtcttc	aatgatctgg	gagtgtcctt	ttctacactt	240
cccactgtga	tttctacttt	ctgcttcaac	tacaaccatg	ttgcgtttta	tgcttgccctg	300
gtccagatgt	tcttcatcca	cactttctcc	ttcatggagt	caggcatact	gctggccatg	360
agcttggtat	gctttgtggc	tatttggtat	ccattacgct	atgtcactgt	gctcactcac	420
aaccgtatat	tggctatggg	tctgggcac	cttaccaaga	gtttcaccac	tctcttccct	480
ttcccttttg	tgggtgaaacg	actgcccttc	tgcaaaggca	atgtttttgca	tcactcctac	540
tgtctccatc	cagatctcat	gaaagtagca	tgtggagaca	tccatgttaa	caacatttat	600

gggctcttgg	tgatcatttt	tacctatggg	atggactcaa	ctttcatcct	gctttcctac	660
gcattgatcc	tgagagccat	gctgggcatc	atatcccagg	aacagcggt	caaggcactc	720
aacacctgca	tgacacacat	ctgtgcagtg	ctggcctttt	atgtgcccac	aattgctgtc	780
tccatgattc	accgcttctg	gaaaagtgt	ccacctgttg	ttcatgtcat	gatgtccaat	840
gtctacctgt	ttgtaccacc	catgctcaac	cctatcatct	acagtgtgaa	aaccaaggag	900
atccgcaaag	ggattctcaa	gttcttccat	aaatcccagg	cc		942

<210> 632

<211> 936

<212> DNA

<213> Unknown (H38g481 nucleotide)

<220>

<223> Synthetic construct

<400> 632

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gagagctctc	actcctggct	gtcagggccc	ctctgcggtga	tgatgctgt	ggcccttggg	120
ggaaatacag	tgatcctgca	ggctgtgcga	gtggagccca	gcctccatga	gcccattgtac	180
tacttccctg	ccatgttctg	cttcagtgat	gtggccatat	ccatggccac	actgcccact	240
gtactccgaa	ccttctgcct	caatgcccgc	aacatcactt	ttgatgcctg	tctaattcag	300
atgtttctta	ttcacttctt	ctccatgatg	gaatcaggta	ttctgctggc	catgagtttt	360
gaccgctatg	tgcccatctg	tgaccccttg	cgctatgcaa	ctgtgctcac	cactgaagtc	420
attgctgcaa	tggttttagg	tgacagctgt	cgaagcttca	tcaccctttt	ccctcttccc	480
tttcttatta	agaggctgcc	tatctgcaga	tccaatgttc	tttctcactc	ctactgcctg	540
cacccagaca	tgatgaggct	tgccctgtgt	gatatcagta	tcaacagcat	ctatggactc	600
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attctgcgtt	ctgtcatggc	cactgcttcc	cgtgaggaac	gcctcaaagc	tctcaacaca	720
tgtgtgtcac	atatcctggc	tgtacttgca	ttttatgtgc	caatgattgg	gggtctccaca	780
gtgcaccgct	ttgggaagca	tgtcccatgc	tacatacatg	tcctcatgtc	aaatgtgtac	840
ctatttgtgc	ctcctgtgct	caaccctctc	atztatagcg	ccaagacaaa	ggaaatccgc	900
cgagccattt	tccgcatggt	tcaccacatc	aaaata			936

<210> 633

<211> 467

<212> DNA

<213> Unknown (H38g482 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(467)

<223> n = A,T,C or G

<400> 633

atggaaagca	atcagacctg	gatcacagaa	gtcatcctgt	tgaggattcca	ggtggaccca	60
gctctggagt	tgttcctctt	tggttttttc	ttgtattctt	acagcttaac	cctgatggga	120
aatgggatta	tcctggggct	catctacttg	gactctagac	tgacacacac	catgtatgtc	180
ttcctgtcac	acctggccat	tgtggacatg	tcctatgcct	cgagtactgt	ccctaagatg	240
ctagcaaate	ttgtgatgca	caaaaaagtc	atctcctttg	ctccttgcat	acttcagact	300
tttttgtatt	tggtgtttgc	tattacagag	tgtctgattt	tggtgatgat	gtgctatgat	360
cggtatgtgg	caatctgtca	cccccttgca	atacaccnt	cattatgaac	tggagagtgt	420
gcactgtcct	ggcctcaact	tgctggatat	ttagctttct	cttggct		467

<210> 634

<211> 988

<212> DNA

<213> Unknown (H38g483 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(988)

<223> n = A,T,C or G

<400> 634

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gcactggcga	ttctcatctn	gtgaactctt	ctctgtcttc	tatacactca	ccctgctggg	120
gaatggggtc	atctttggga	ttatctgcct	ggactctaag	cttcacacac	ccatgtactt	180
cttcctctca	cacctggcca	tcattgacat	gtcctatgct	tccaacaatg	ttcccaagat	240
gttggaacaac	ctaatagaac	agaaaagaac	catctccttt	gttccatgca	taatgcagac	300
ttttttgtat	ttggcttttg	ctgttacaga	gtgcctgatt	ttgggtggtga	tgtcctatga	360
taggtatgtg	gccatctgcc	accctttcca	gtacactgtc	atcatgagct	ggagagtgtg	420
cacgatcctg	gttctcacgt	cctggtcattg	tgggtttgcc	ctgtccctgg	tacatgaaat	480
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tacctgtgtg	tttgtcttag	tcgggcctct	ttccttgatt	ctgggtctct	acatgcacat	660
cctcggggcc	atcctgaaga	tccagacaaa	ggaggggccg	ataaaggcct	tctccacctg	720
ctctcccac	ctgtgtgtg	ttggactatt	ctttggcata	gccatgggtg	tttacatggt	780
cccagactct	aatcaacgag	aggagcagga	gaaaatgctg	tcctgtttc	acagtgtctt	840
gaacccaatg	ctgaaccccc	tgatctacag	cctgaggaat	gtcagttga	agggcgccct	900
ccacagagca	ctccagagga	agaggtccat	gagaacggtg	tatgggcttt	gcctttaaaa	960
catgtggttt	gctgaagcaa	gaattttg				988

<210> 635

<211> 941

<212> DNA

<213> Unknown (H38g484 nucleotide)

<220>

<223> Synthetic construct

<400> 635

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gagatggaag	tgctcctctt	ttagatcttc	tccctgttat	acatcttcag	cctgctggca	120
aatggcatga	tcttgggact	catctgtctg	gaccacattc	tgectacccc	catgtacttc	180
ttcctctcac	acctggccat	cattgacatg	tccatgtctt	ccaacaatgt	tcccaagatg	240
ttggcaaatc	tgatgaacaa	gaaaagaacc	atctcctttc	ttccatgcat	aatgcagacc	300
tattttgtatt	tctcttttgc	tgctacagag	tgtctgattt	tggtggtgat	gtcctatgat	360
aggtatgtgg	ccatttgcca	ccctctccag	tacactgtca	tcattgagctg	gagagtgtgc	420
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cttcttctaa	ggttgccggt	ctgcggggccc	cgggatgtga	accacctctt	ctgtgaaatt	540
ctgtctgtcc	tcaagctggc	ctgttctgac	acctgggggt	aaccacagtg	gtcatatttg	600
ctacctgtgt	gtttgtctta	gttggacctc	tttgtttgat	gcttgtctcc	tacatgcaca	660
tcctctggcc	atcctaaaga	tccagacaaa	ggaagccgca	taaaggcctt	ctcgacctgc	720
tcctcccacc	tgtgtgtggt	tggtactctt	ttgtggcata	gccactgggtg	gtttacatag	780
tcccagactc	taatcaacga	gaggagcagg	agaaaatgct	gtccctgttt	cacagtgtct	840
tgaacccaat	tctgaacccc	ctgatctaca	gtctgaggaa	tgctcaggtg	aagggcgccc	900
tccacagagc	actgcagagg	acgctgtcta	tgtaaggagt	g		941

<210> 636

<211> 1002

<212> DNA

<213> Unknown (H38g485 nucleotide)

<220>

<223> Synthetic construct

<400> 636

atgtgttatc	tttctcagct	atgcctcagc	cttgggggaac	acactttaca	tatgggggatg	60
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gtgagacata	ccaatgagag	caacctagca	ggtttcatcc	ttttagggtt	ttctgattat	120
cctcagttac	agaaggttct	atattgtctc	atattgattc	tgtatttact	aactattttg	180
gggaatacca	ccatcattct	ggtttctcgt	ctggaaccca	agcttcata	gccgatgtat	240
ttcttccttt	ctcatctctc	cttctgttac	cgtgtcttca	ccagcagtg	tattccccag	300
ctcctggtaa	acctgtggga	acccatgaaa	actatgcct	atgggtggctg	tttgggtcac	360
ctttacaact	cccatgcct	gggatccact	gagtgcgtcc	tcccggctgt	gatgtcctgt	420
gaccgctatg	tggctgtctg	cgcctctctc	cattacactg	tcttaatgca	tatccatctc	480
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gtccctgtgc	tcatcaagct	ggcttgtgtg	ggcaccacgt	ttaacgaggc	tgagcttttt	660
gtggttagta	tccttttctt	tatagtgcct	gtctcattca	tcctgggtctc	ctctgggtac	720
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tgcttctccc	acgtgacagt	ggtcaccact	ttttatggaa	ccatcatctt	catgtatctg	840
cagccagcca	agagtagatc	cagggaccag	ggcaagtgtg	tttctctctt	ctacactgtg	900
gtaaccgcga	tgtttaaccc	tcttatttat	accttgagga	tcaaggaggt	gaaaggggca	960
ttaaagaaag	ttctagcaaa	ggctctggga	gtaaatattt	ta		1002

<210> 637

<211> 510

<212> DNA

<213> Unknown (H38g486 nucleotide)

<220>

<223> Synthetic construct

<400> 637

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gcactggaga	ttctcctctg	tggacttttc	tctgccttct	atacactcac	cctgctgggg	120
aatgggggtca	tctttgggat	tatctgcctg	gactgtaagc	ttcacacacc	catgtacttc	180
ttcctctcac	acctggccat	tgttgacata	tcctatgctt	ccaactatgt	ccccaagatg	240
ctgacgaatc	ttatgaacca	ggaaagcacc	atctcctttt	ttccatgcat	aatgcagaca	300
ttcttgtatt	tggcttttgc	tcacgtagag	tgtctgattt	tgggtggtgat	gtcctatgat	360
cgtatgcgg	acatctgcc	ccccttacgt	tacaatatcc	tcatgagctg	gagagtgtgc	420
actgtcctgg	ctgtggcttc	ctgggtgttc	agcttctctc	tggctctggt	cccgtttagt	480
tctcagtcgc	tgaggtgcat	gaacgtactg				510

<210> 638

<211> 924

<212> DNA

<213> Unknown (H38g487 nucleotide)

<220>

<223> Synthetic construct

<400> 638

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ggtaatgtgg	ctatcttgat	gttgggtgagc	acctcccatc	agttgcatac	ccccatgtac	180
ttctttctga	gcaacctctc	cttctctggag	atthgggtata	ccacagcagc	agtgcccaaa	240
gcactggcca	tcctactggg	gagaagtcag	accatatcat	ttacaagctg	tcttttgcag	300
atgtactttg	ttttctcatt	aggctgcaca	gagtacttcc	tcctggcagc	catggcttat	360
gaccgctgtc	ttgccatctg	ctatccttta	cactacggag	ccatcatgag	tagcctgctc	420
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gccctcatca	gtggcctgtc	cttctgtggc	ccccgtgcca	tcaaccactt	cttctgtgac	540
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atcatcagca	ccatcctcag	gatccctctc	gccagtggcc	ggagcaaagc	cttctccacg	720
tgtcctctgc	atctcaccgt	ggtgctcatt	tggtaggggt	ccacagtttt	ccttcacgct	780
cgcacctcta	tcaaagatgc	cttggatctg	atcaaagctg	tccacgtcct	gaacactgtg	840
gtgactccag	ttttaaaccc	cttcatctat	acgtctcgta	ataaggaagt	aagagagact	900
ctgctgaaga	aatggaagg	aaaa				924

<210> 639
 <211> 669
 <212> DNA
 <213> Unknown (H38g488 nucleotide)

<220>
 <223> Synthetic construct

<400> 639
 aaagaaatgg gatgtcacca atcaatgggc acagaattca tcctgggtggg attccagctc 60
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 atctgtctgg accacagtct gcacactctc atacttcttc ctctcacacc tggccgctcat 180
 tgacatggcc tatgcttcca acaatgttcc caagatgctg gtggatcttg caaactagaa 240
 aagcaccatg tgcttttttc catgcataat gcagacattc ttgtatttgg cttttgctca 300
 catagagtgt ctgattttgg tggttttgtc ctatgatcgc tatgtggcca tctgccaccc 360
 cttacgttac aatgtcctca tgagctggag agagtgcact gtcctggctg tggcttcctg 420
 ggtgttcagc ttctcctggt ctctgggtcca tttagttctc attctgaggc tgccttcctg 480
 tgggctcatg aaatcaacca ctactgtgaa atcctgtctg tcctcaagtt ggcctgtgct 540
 gacacctggc tcaaccagggt ggtcatcttt gcaagctgca tgttcacct ggtagggtga 600
 ctctgctggg tgctgggtctc ttacttgggc atctggcggc atctgagatc agttgcgaag 660
 ccaaaaagg 669

<210> 640
 <211> 927
 <212> DNA
 <213> Unknown (H38g489 nucleotide)

<220>
 <223> Synthetic construct

<400> 640
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 cctcgtctgg aggtgttct ctttgtattt gtccttttct tctacctcct gaccttgtg 120
 ggaaacttca ccataatcat catctcatat ctggatcccc ctcttcatac cccaatgtac 180
 ttttttctca gcaacctctc ttactggac atctgcttca ctactagcct tgctcctcag 240
 accttagtta acttgcaaag accaaagaag acgatcactt acggtggttg tgtggcgcaa 300
 ctctatattt ctctggcact gggctccact gaatgtatcc tcttggctga catggccttg 360
 gatcggtaca ttgctgtctg caaaccctc cactatgtag tcatcatgaa cccacggctt 420
 tgccaacagc tggcatctat ctctgggtc agtgggttgg ctagtccct aatccatgca 480
 acttttacct tgcaattgcc tctctgtggc aaccataggc tggaccattt tatttgcgaa 540
 gtaccagctc ttctcaagtt ggcttgtgtg gacaccactg tcaatgaatt ggtgcttttt 600
 gttgttagtg ttctgtttgt tgtcattcca ccagcactca tctccatctc ctatggcttc 660
 ataactcaag ctgtgctgag gatcaaatca gtagaggcaa ggcacaaagc cttcagcacc 720
 tgctcctccc accttacagt ggtgattata ttctatggca ccataatcta cgtgtacctg 780
 caacctagtg acagctatgc ccaggaccaa gggaagtta tctccctctt ctacaccatg 840
 gtgaccccca ctttaaatcc tatcatctat actttaagga acaaggatat gaaagaggct 900
 ctgaggaaac ttctctcggg aaaattg 927

<210> 641
 <211> 1012
 <212> DNA
 <213> Unknown (H38g490 nucleotide)

<220>
 <223> Synthetic construct

<400> 641
 tctacagacc cacagaatct aacagatgtc tctgtattcc tcctcctaga actacagagg 60
 atccagaacg gcagccggtc ctcaactggc tgttctgtgc catgtgcctg gtcattggtg 120
 tggggaacct gctcatcatc ctggccatca gccctgactc ccacctccac atccccatgt 180

acttcttccct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcacctc	ctatgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggaagagag	acatgctcct	gagtgatgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgtttctgtg	gcttcctagt	tttgttgtct	ttttttttct	gtcctcagtc	ttttagactc	480
ccagctgcac	aacttgattg	ccttacaagt	gacctgcttc	aaggatgtgg	aaattcctaa	540
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gataatcatg	tatttccctg	ctgccatatt	tggttttctt	cccatctcag	ggacctttt	660
ctcttactct	aaaattgttt	cctccattct	gaggggttca	tcatcagggtg	ggaagtataa	720
agccttctcc	acctgtgggt	ctcacctgtc	agttgtttgc	tgagtttatg	gaacaggcgt	780
tggaggttac	ctcagttcag	atgatgtgtc	atcttcccc	agaaagggtg	cagtggcctc	840
agtgatgtac	acgggtggtca	cccccatgcc	gaaccccttc	atctacagcc	tgagaaacag	900
ggatattaaa	agtgtcctgc	ggcggccgca	cggcagcaca	gtctaactct	aatatcttct	960
tatctgttcc	attccttttg	tagtgtgggt	taaaaaggc	agaaagggtca	aa	1012

<210> 642

<211> 879

<212> DNA

<213> Unknown (H38g491 nucleotide)

<220>

<223> Synthetic construct

<400> 642

atgggatttt	cgaattcctg	ggatattcag	attgtacatg	ctgctctatt	cttcctagtt	60
tacctggcag	ctgtcatagg	aaatctccta	atcatcatat	ttaccactct	ggatgttcac	120
ctccaaaccc	caatgtattt	ctttttgaga	aacttgtctt	tcttagattt	ttgttacatc	180
tctgtcacia	ttccaaaatc	tattgttagt	tccttgactc	atgatacttc	catttctttc	240
tttgggtgtg	ctctgcaagc	cttctttttc	atggacttgg	caactacgga	ggtagccatc	300
cttacagtga	tgtcctatga	ccgctatatg	gccatctgcc	ggcctttaca	ttatgagggtc	360
atcataaacc	aagggtgtctg	tctgaggatg	atggccatgt	cgtgggtcag	tgggggtgatc	420
tgtggattca	tgcattgtgat	agcaacattc	tcattaccat	tctgtgggcg	caatagaata	480
cgtcaatttt	tctgtaatat	tcacagctc	ctaagcctct	tagaccccaa	agtaattacc	540
attgagattg	gagtcatggg	ttttgggtaca	agtcttgtga	taatctcctt	tgttgtaatt	600
actctctcct	acatgtacat	ttttctgtgc	atcatgagga	ttccttctaa	ggagggttaga	660
tcaaaaacat	tttctacctg	cattccacat	cttgtgggtg	taacactctt	tatgatatact	720
ggcagcattg	cctatgtgaa	gccaatttca	aattctcccc	ccgttctgga	tgttttctctg	780
tctgcgttct	acacagtcgt	gcccccgacc	ctgaaccccg	tcattctatag	tctgaggaat	840
agggacatga	aggcagccct	gagaaggcag	tgtggtccc			879

<210> 643

<211> 1020

<212> DNA

<213> Unknown (H38g492 nucleotide)

<220>

<223> Synthetic construct

<400> 643

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tcttcccaaa	caagtgtggt	cttcttctta	gacaatttgt	cattttcatt	atgagtgtaa	120
cagaaaatac	gctcatgac	ctcctcatte	gcagtgactc	ccgaactccac	actccaatgt	180
attttctgct	cagccatctc	tccttaattg	atatcttgca	tgtttccaac	atcgttccca	240
aaatgggtcac	taactttctg	tcaggcagca	gaactatttc	atttgcagg	tgtgggttcc	300
aggatattct	gtccctcacc	ctcctgggtg	gtgagtgcct	tctcctgggt	gcaatgtcct	360
gtgatcgcta	tgtggctatc	tgtcaccgc	tgcgctatcc	gattcttatg	aaggagtatg	420
ccagcgctct	catggctgga	ggctcctggc	tcattggggg	tttcaactcc	acagtccaca	480
cagcttatgc	actgcagttt	cccttctgtg	gctctagggc	aattgatcac	ttcttctgtg	540
aagtccctgc	catgttgaag	ttgtcctgtg	cagacacaa	acgctatgaa	cgagggggtt	600
gtgtaagtgc	tgtgatcttc	ctgctgatcc	ctttctcctt	gatctctgct	tcttatggcc	660
aaattattct	tactgtcctc	cagatgaaat	catcagaggc	aaggaaaaag	tcattttcca	720

cttggttcctt	ccacatgatt	gtggtcacga	tgtactatgg	gccatttatt	tttacatata	780
tgagacctaa	atcataccac	actccaggcc	aggataagtt	cctggcaata	ttctatacga	840
tcctcacacc	cacactcaac	cctttcatct	acagctttag	gaataaagat	gttctggcgg	900
tgatgaaaaa	tatgctcaaa	agtaactttc	tgcaaaaaaa	aatgaatagg	aaaattcctg	960
aatgtgtgtt	ctgtctattt	ctatgttaaa	tgcttgaagg	atactcatga	gaggtttcct	1020

<210> 644

<211> 932

<212> DNA

<213> Unknown (H38g493 nucleotide)

<220>

<223> Synthetic construct

<400> 644

atgaagtggg	caaaccagac	agctgtgacg	gaatacgtcc	tgatggggct	acacgagcac	60
tgtaacctgg	agggtgtcct	gtttgtgttc	tgcttgggca	tctactccgt	gaatgtgttg	120
gggaacgccc	tcctcatagg	gctgaacgtg	ctgcaccctc	gcctgcacaa	ccccatgtac	180
ttctcagcaa	cctctccctc	atggacatct	gcggcacctc	ctcctttgtg	cctctcatgc	240
tagacaattt	cctggaaacc	cagaggacca	tttccttccc	tggtgtgtgc	ctgcagatgt	300
acctgacctt	ggcgtgtgga	tcaacggagt	gcctgtgtgt	ggctgtgatg	gcatatgacc	360
gttatgtggc	tatctgccag	ccgcttaggt	accagagct	catgagtggg	cagacctgca	420
tgacagatgg	agcgtgagc	tgggggacag	gctttgccaa	ctcactgcta	cagtccatcc	480
ttgtctggca	cctcccttcc	tgtggccacg	tcatcaacta	cttctatgag	atcttggcag	540
tgctaaaact	ggcctgtggg	gacatctccc	tcaatgcgct	ggcattaatg	gtggccacag	600
ccgtcctgac	actggccccc	ctcttgetca	tctgcctgtc	ttaccttttc	atcctgtctg	660
ccatccttag	ggtaccctct	gctgcaggcc	ggtgcaaagc	cttctccacc	tgctcagccc	720
accgcacagt	ggtggtggtt	ttttatggga	caatctcctt	catgtacttc	aaacccaagg	780
ccaaggatcc	caacgtggat	aagactgtcg	cattgttcta	cgggggtgtg	acgccctcgc	840
tgaaccccat	catttacagc	ctgaggaatg	cagaggtgaa	agctgccgtc	ctaactctgc	900
tgagaggagg	tttgcctccc	aggaaagcat	cc			932

<210> 645

<211> 957

<212> DNA

<213> Unknown (H38g494 nucleotide)

<220>

<223> Synthetic construct

<400> 645

atgatggaaa	tagccaatgt	gagttctcca	gaagtctttg	tctcctctgg	cttctccaca	60
cgaccctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcatcatcat	tctgggtctc	catacagatg	tgacacctca	cacacctatg	180
tacttctttc	ttgccaacct	ccccttctct	gacatgagct	tcaccacgag	cattgtccca	240
cagctcctgg	ctaacctctg	gggaccacag	aaaaccataa	gctatggagg	gtgtgtggtc	300
cagttctata	tctcccattg	gctgggggca	accgagtgtg	tctgtctggc	caccatgtcc	360
tatgaccgct	acgctgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcatccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggtc	tgaccaccag	catggtgggc	480
tccaagctca	ccatgtctct	accgctgtgt	gggaacaatt	gcatcgacca	cttcttttgc	540
gagatgcccc	tcattatgca	actggcttgt	gtggatacca	gcctcaatga	gatggagatg	600
tacctggcca	gctttgtctt	tgttgtctct	cctctggggc	tcatectggt	ctcttacggc	660
cacattgccc	gggccgtgtt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tgtgggtgtc	ctgttttacg	ggagcatcat	cttcatgtat	780
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gtagtcactc	ctgcgctgaa	cccacttatt	tacaccctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatggtatt	agagaactgc	tgtggctctg	caggcaagct	ggcgcaa	957

<210> 646

<211> 792

<212> DNA

<213> Unknown (H38g495 nucleotide)

<220>

<223> Synthetic construct

<400> 646

atgatggttc	tgagtatcgt	tttgacctcc	ctgtttggca	attccctcat	gattctcctg	60
attcactggg	accaccggtt	ccacacgccc	atgtacttcc	tcctgagcca	actttccctc	120
atggacgtga	tgtctggtttc	caccactgtg	cccaaatgg	cggtgacta	cttgaccgga	180
agtaaggcca	tctcccgccg	tggtgtgggt	gcgcagatct	tcttctctcc	cacactgggt	240
gggtggagagt	gcttcctctt	agcagccatg	gcctatgacc	gctatgcggc	tgtctgccac	300
ccactccgat	atcccactct	catgagctgg	cagctgtgcc	tgaggatgaa	cctgtcgtgt	360
tggtctcctgg	gtgcagctga	cgggtctcctg	caggctgttg	ctaccctgag	cttcccatat	420
tgcggtgcac	acgagatcga	tcacttcttc	tgcgagacct	ccgtgctggg	gcgtttggct	480
tgtgctgaca	cttcagtctt	cgaaaacgcc	atgtacatct	gctgtgtgtt	aatgtctctg	540
gtccccctttt	ccctcactct	gtcctcctat	ggtctcatcc	tcgctgctgt	tctgcacatg	600
cgctctacag	aagcccgcaa	gaaggccttt	gccacctgct	cttcacatgt	ggctgtgggtg	660
ggactctttt	atggagctgc	cattttttacc	tatatgagac	ccaaatccca	cagggtccact	720
aaccacgaca	aggttgtgtc	agccttctat	actatgttca	cccctttact	aaacccccctc	780
atctacagtg	tg					792

<210> 647

<211> 662

<212> DNA

<213> Unknown (H38g496 nucleotide)

<220>

<223> Synthetic construct

<400> 647

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ctgggggggc	cagagaagac	catcacctac	cacggctgtg	tggcccaact	ctacatctac	120
atgatgctgg	gtccaccga	gtgcgtcttc	ctggttgtca	tgtcccatga	ccgctatgtg	180
gccgtctgcc	ggctccctga	ctacatggca	gtcatgcgcc	cacatctctg	cctgcagctg	240
gtgactgtgg	cctgggtgctg	tggtcttcta	aactccttca	tcattgtgtcc	tcagacgatg	300
cagctctccc	gggtgtggacg	tcgcagggtg	gaccacttcc	tgtgtgagat	gcctgtctct	360
attgccatgt	cttgtgagga	aaccatgctg	gtagaagcga	ttcacctttg	ccctgggggt	420
ggctctcttc	ctgggtgcgc	tctccctcat	cctcatctcc	tacggcgtga	ttgcagccgc	480
gggtgctgagg	atgaagtcag	cagcagggcg	aaagaaagcc	ttccacacct	gctcttctca	540
cctcacagtg	gtctctctct	tctacggaac	catcatctac	gggtgtacctg	aagccggcca	600
acagctactc	ccaagatcag	gggaagtcc	tgactctctt	ctacaccatc	gtcattccca	660
gc						662

<210> 648

<211> 936

<212> DNA

<213> Unknown (H38g497 nucleotide)

<220>

<223> Synthetic construct

<400> 648

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ccagccctgg	agcatctgct	cttccctctg	tgctcagcca	tgtacctggg	gacctcctg	120
gggaacacag	ccatcatggc	ggtagcgctg	ctagatatcc	acctgcacac	gcccgtgtac	180
ttcttccctg	gcaacctctc	tacctggac	atctgctaca	cgccacctt	tgtgctctg	240
atgctggctc	acctcctgtc	atcccgggaag	accatctcct	ttgctgtctg	tgccatccag	300
atgtgtctga	gcctgtccac	gggtccacg	gagtgcctgc	tactggccat	cacggcctat	360
gaccgctacc	tggccatctg	ccagccactc	aggtaccacg	tgctcatgag	ccaccggctc	420
tgcgtgctgc	tgatgggagc	tgccctgggtc	ctctgcctcc	tcaagtcggg	gactgagatg	480
gtcatctcca	tgaggctgcc	cttctgtggc	caccacgtgg	tcagtcactt	cacctgcaag	540

atcctggcag	tgctgaagct	ggcatgcggc	aacacgtcgg	tcagcgaaga	cttctgtctg	600
gcgggctcca	tcctgtctgt	gcctgtaccc	ctggcattca	tctgcctgtc	ctacttgctc	660
atcctggcca	ccatcctgag	ggtgccctcg	gccgccaggt	gctgcaaagc	cttctccacc	720
tgcttggcac	acctggctgt	agtgtctgtt	ttctacggca	ccatcatctt	catgtacttg	780
aagcccaaga	gtaaggaagc	ccacatctct	gatgaggctt	tcacagtect	ctatgccatg	840
gtcacgacca	tgctgaaccc	caccatctac	agcctgagga	acaaggaggt	gaaggaggcc	900
gccaggaagg	tgtggggcag	gagtcggggc	tccagg			936

<210> 649

<211> 940

<212> DNA

<213> Unknown (H38g498 nucleotide)

<220>

<223> Synthetic construct

<400> 649

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agagcccttg	ggggcctcct	ctttgtgatt	ttttatcagc	ctatttggtg	acagtccttg	120
gaaacaccct	tattattatc	ctgattcttg	tggattacag	gctccactca	cccatgtatt	180
tcttctctag	caatctctct	ttcagtgaag	cattaaccat	aacctgtgct	gttcctaaga	240
tgctggaggg	cttcccgctc	gaaaggaaga	gcatacaag	tggcgaatgc	tctgcacagt	300
cctatttcta	ttttctttcc	ggatgcactg	agtttattcc	ttttgtgtgc	atgtcctatg	360
accgctatgt	ggccatttgc	agtcctcttc	agtaccctgc	aattatgacc	agtcactctt	420
gtgcccacct	cgtcatcctc	tcctgggtgg	gtggctttct	cctcatgctc	ccatccacca	480
tcctcaaggc	aggactgcca	cactgtgggc	ccaacgtgat	tgagcacttt	ttctgtgaca	540
gcgcccctct	cctccacctg	gcctgtgtgc	acattcgtgc	tattgagctg	ttggactttc	600
tcagctcact	ggtcctgatc	ctcagctccc	tctcactcac	agtggctctc	tatgtttaca	660
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tcacaccctt	cctgaatccc	ttcgtcttca	gtctgtggaa	tgaaccctatg	aaagatgcac	900
tgaaggacgc	ctcgggccgga	ggacagagct	tgctcaaagg			940

<210> 650

<211> 927

<212> DNA

<213> Unknown (H38g499 nucleotide)

<220>

<223> Synthetic construct

<400> 650

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atgtgcattt	tgcattcgat	tctcttcttg	ttgatttatt	tgtgtgccct	gatggggaat	120
gtcctcatta	tcattgatcac	aactttggac	catcatctcc	acacccccgt	gtatttcttc	180
ttgaagaatc	tatctttctt	ggatctctgc	cttatttctc	tcacggctcc	caaactctatc	240
gccaatctct	tgatacacia	caactccatt	tcattccttg	gctgtgtttc	ccagggtcttt	300
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tatactgcta	tatgtcacc	tctgcactat	gatgtcatca	tggacaggag	cacctgtgtc	420
caaagagcca	ctgtgtcttg	gctgtatggg	ggctctgattg	ctgtgatgca	cacagctggc	480
accttctcct	tatctacttg	tgggtccaac	atgggtccatc	agttcttctg	tgacattccc	540
cagttattag	ctatttcttg	ctcagaaaat	ttaataagag	aaattgcact	catccttatt	600
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tcagagctctc	cttctatttt	ggatgctgta	atttctgtgt	tctacactat	gtgccccca	840
acctttaatc	ccattatata	cagtttgaga	aacaaggcca	taaagggtggc	tctggggatg	900
ttgataaagg	gaaagctcac	caaaaag				927

<210> 651

<211> 942
 <212> DNA
 <213> Unknown (H38g500 nucleotide)

<220>
 <223> Synthetic construct

<400> 651
 atgggggatg tgaatcagtc ggtggcctca gacttcattc tgggtggcct cttcagtcac 60
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 ggcaacaccc ttctttctctt cttgatecgt gtggactccc ggctccacac acccatgtac 180
 ttctgtctca gccagctctc cctgtttgac attggctgtc ccatggtcac catccccaag 240
 atggcatcag acttttctgcy gggagaagggt gccacctcct atggagggtg tgcagctcaa 300
 atattcttcc tcacactgat ggggtgtggct gagggcgtcc tgttggctcct catgtcttat 360
 gaccgttatg ttgctgtgtg ccagccctg cagtatcctg tacttatgag acgccaggta 420
 tgtctgtctga tgatgggctc ctcttgggtg gtagggtgtgc tcaacgcctc catccagacc 480
 tccatcaccc tgcattttcc ctactgtgcc tcccgattg tggatcactt cttctgtgag 540
 gtgccagccc tactgaagct ctctgtgca gatacctgtg cctacgagat ggcgctgtcc 600
 acctcagggg tgctgatcct aatgtctcct ctttccctca tcgccacctc ctacggccac 660
 gtgttgacag ctgttctaag catgcgctca gaggaggcca gacacaaggc tgtcaccacc 720
 tgetctctgc acatcacggt agtggggctc ttttatgggt ccgccgtgtt catgtacatg 780
 gtgccttgcy cctaccacag tccacagcag gataacgtgg tttccctctt ctatagcctt 840
 gtcaccccta cactcaaccc ctttatctac agtctgagga atccggagggt gtggatggct 900
 ttgggtcaaag tgcttagcag agctggactc agggcaatgt gc 942

<210> 652
 <211> 936
 <212> DNA
 <213> Unknown (H38g501 nucleotide)

<220>
 <223> Synthetic construct

<400> 652
 atggatctta aaaatggatc tctagtgaac gagtttattt tactaggatt ttttggacga 60
 tgggaacttc aaattttctt ctttgtgaca ttttccctga tctacgggtgc tactgtgatg 120
 ggaaacattc tcattatgggt cacagtgaac tgtagggtcaa cccttcattc tccctgttac 180
 tttctccttg gaaatctctc ttttttggaac atgtgtctct ccaactgccac aacacccaag 240
 atgatcatag atttgtctac tgaccacaag accatctctg tgtggggctg cgtgaccag 300
 atgttcttca tgcacttctt tgggggtgct gagatgactc ttctgataat catggccttt 360
 gacaggtagt tagccatatg taaaccctg cactatagga caatcatgag ccacaagctg 420
 ctaaaggggt ttgcgatact ttcatggata attgggtttt tacactccat aagccagata 480
 gttttaacaa tgaacttgcc tttctgtggc cacaatgtca taaacaacat attttgtgat 540
 cttcccttg tgatcaagct tgcttgcat gaaacataca ccctggaatt atttgtcatt 600
 gctgacagcy ggcgtctctc ttccacctgt ttcatcctct tgcctgtttc ttacattgtc 660
 atcctgggtca gtgtaccaa aaaatcatca catgggctct ccaaggcgtc gtccacattg 720
 tctgcccaca tcattgtgggt cactctgttc tttggacctt gtatttttat ctatgtttgg 780
 ccattcagta gtttggcaag caataaaact cttgccgtat tttatacagt tatcacacc 840
 ttactgaatc cgagtattta taccctgaga aataagaaaa tgcaagaggc cataagaaaa 900
 ttacggttcc aatatgttag ttctgcacag aatttc 936

<210> 653
 <211> 972
 <212> DNA
 <213> Unknown (H38g502 nucleotide)

<220>
 <223> Synthetic construct

<400> 653
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atatccataa	ttaagtaacc	taatcattat	ctttgtagtg	aaactggatc	ctcaattgca	180
ttctcccatg	tacttcctac	tggccaacct	gtcatctact	gatatgcccc	tggcctcctt	240
tgctactcct	aagaaaatcg	ataatgtaat	tagtgaatat	aggaccatct	cctatgaagg	300
ctgcacgaca	tagagatttt	tccttcactt	tttaagtggg	agtgagatgg	ttttactcct	360
agccatggca	atcgatagat	aatttgccat	atgcaaacc	ctccattaca	agtccattgc	420
atcggacttg	ctcctcgctc	ctggactatg	gatttcatgc	acaccatgag	ccaaattggt	480
ctcacagtga	ctttgccatt	ctgtggtctc	agtgttggg	atatttttgt	gtgtgtgtga	540
tctgccttgt	gataaaactt	gcctgtacag	acacttacat	cttggagcta	tgagtcattg	600
cagacagtgg	actactttct	ttgtgtgtgt	tcatgtttct	gttaatctcc	tatagcaccg	660
tcctgattat	tatttgacat	cattcctcca	gggggtcttc	caaaactctg	tccacgcttt	720
cagccacat	tatggtggtg	gtactgttct	ttggagcttg	catctttacc	tgtgaaagac	780
cattcagcac	tggtccatt	gatgtctgtg	ttttaacta	tttttgctcc	ccttttaaat	840
ccaatcatct	acacattcag	gaataacgac	atgaagaaag	cattaagaaa	aatgaagatt	900
aactttgtga	gttctagatc	aacttgataa	ctaaaatatt	ataatcacta	aaagcatcat	960
cattattgtt	gt					972

<210> 654

<211> 936

<212> DNA

<213> Unknown (H38g503 nucleotide)

<220>

<223> Synthetic construct

<400> 654

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cggaagatcc	agctcctcct	cttcctcttt	ttctcagtg	tctatgtgtc	aagcctgatg	120
ggaatctccc	tcattgtgct	aactgtgacc	tctgaccttc	gtttacagtc	ccccatgtac	180
ttcctgctgg	ccaacctttc	catcatcaat	ttggtatttt	gttcctccac	agctcccaag	240
atgatttatg	accttttcag	gaagcacaag	accatctctt	ttgggggctg	tgtagttcag	300
atcttcttta	tccatgcagt	tgggggaact	gagatgggtgc	tgctcatagc	catggctttt	360
gaccgatatg	tggccatatg	taagcctctc	cactacctga	ccatcatgaa	cccacaaagg	420
tgcattttgt	ttttagtcac	ttcctggatt	ataggtatta	ttcactcagt	gattcagttg	480
gcttttggtg	tagacctgct	gttctgtggc	cctaataaat	tagatagttt	cttttgtgat	540
cttcctcgat	ttatcaaact	ggcttgcata	gagacctaca	cattgggatt	catggttact	600
gccaatagtg	gatttatttc	tctggcttct	tttttaattc	tcataatctc	ttacatcttt	660
attttgggtg	ctgttcagaa	aaaatcttca	ggtggatatat	tcaaggcttt	ctctatgctg	720
tcagctcatg	tcattgtggt	ggttttggtc	tttgggccat	taatcttttt	ctatattttt	780
ccatttccca	catcacatct	tgataaattc	cttgccatct	ttgatgcagt	tatcactccc	840
gttttgaatc	cagtcattcta	tacttttaga	aataaagaga	tgatgggtggc	aatgagaaga	900
cgatgtctctc	agtttgtgaa	ttacagtaaa	atcttt			936

<210> 655

<211> 967

<212> DNA

<213> Unknown (H38g504 nucleotide)

<220>

<223> Synthetic construct

<400> 655

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tgggagactc	aagatttttc	ttttttgctt	ttcttgtctt	ttctatgtgt	ccggtgtgat	120
ggcaaacctc	attgtagtgg	tcattgtaac	ctctgacctt	tacttgcact	cctccttgta	180
tattttgctg	gccaacctct	ctgtcattga	tctcacattt	tgtccatttg	cagcacgcaa	240
gatgatttgt	gatattttca	ggaaacagaa	agtcatttcc	ttttggggct	gtgtagctca	300
gatcttcttt	agccatgctg	ttggggggcac	tgagatgggtg	ctgtctcatag	ccatggcctt	360
tgacagatat	gttgccgtat	gtaagccctt	tcactacctg	accatcatgc	atccaagaat	420
gtgcattttg	attctagtgg	cttcctgggc	cattgggtctc	attcactcat	tggtccaatt	480
gtcttttgta	gtaaacttgc	ccttctgtgg	ccctaattgtg	ttggacagct	tttactgtga	540

catacctcag	ctcatcaaac	ttgcttgac	aaatacctat	aaactgcagt	tcatgggttac	600
tgctaatagt	gggttcattt	ccttgagtg	tttcttcttg	ctcatcctct	cttacatctt	660
cattctggcc	actcttcaga	aacactcctc	aggaggctca	tccaaggctg	tctctactct	720
gtcagctcat	attactgttg	tggttttatt	ctttgggtcca	ctgatttttt	tctatgtatg	780
gccctctcct	ccaacacatc	tgaataaatt	tctagccata	tttgatgcca	tttccactcc	840
ttttctgaat	ccagtcactc	acacattcag	gaacagggaa	atgaagattg	caataaggag	900
agtgttcggt	caatttatgg	gttttagaaa	aactacttaa	gtggctttat	taaaacacag	960
aatttcc						967

<210> 656

<211> 873

<212> DNA

<213> Unknown (H38g505 nucleotide)

<220>

<223> Synthetic construct

<400> 656

atggttgggg	caaatcactc	cgtgggtgtca	gagtttgtgt	tcctgggact	caccaattcc	60
tgggagatcc	gacttctcct	ccttggtgttc	tcctccatgt	tttacatggc	cagtatgatg	120
ggaaactctc	tcattttgct	cactgtgact	tctgaccctc	acttgactc	ccccatgtat	180
tttctgttag	ccaacctctc	cttcattgac	ctgggtgttt	cctctgtcac	ttctccaaa	240
atgatttatg	acctgttcag	aaagcacgaa	gtcatctcct	ttggaggctg	catcgctcaa	300
atcttcttca	tccacgtcat	tggcgggtgtg	gagatgggtgc	tgctcatagc	catggccttt	360
gacagatatg	tggccatatg	taagccctc	cagtacctga	ccattatgag	cccaagaatg	420
tgcattgtct	tcttagtggc	tgcctgggtg	accggcctta	tccactctgt	agttcaattg	480
gtttttgtag	taaacttgcc	cttctgtggt	cctaattgtat	cggacagctt	ttactgtgac	540
cttcctcggt	tcataaaact	tgcctgcaca	gacagctacc	gactggagtt	catgggttaca	600
gccaacagtg	gattcatctc	tctgggctcc	ttcttcatac	tgatcatttc	ctatgtggtc	660
atcattctca	ctgttctgaa	acactcttca	gctgggttat	ccaaggctct	gtccaccctt	720
tcagctcacg	tcagtgtggt	agttttgttc	tttgggtcctt	tgatttttgt	ctatacgtgg	780
ccatctccct	ccacacacct	ggataagttt	ctggccatct	ttgatgcagt	tctcactcct	840
gttttaaatc	ctatcatcta	cacattcagg	aat			873

<210> 657

<211> 936

<212> DNA

<213> Unknown (H38g506 nucleotide)

<220>

<223> Synthetic construct

<400> 657

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cgggagattc	agcttctact	ttttgttttc	tctttgttgt	tctactttgc	gagcatgatg	120
ggaaaacttg	tcattgtatt	cactgtaacc	atggatgtct	atctgcactc	ccccatgtat	180
ttcctcctgg	ctaacctctc	aatcattgat	atggcatttt	gctcaattac	agccccctaa	240
atgatttgtg	atattttcaa	gaagcacaag	gccatctcct	ttcggggatg	tattactcag	300
atcttcttta	gccatgtctt	tgggggcaact	gagatgggtgc	tgctcatagc	catggccttt	360
gacagataca	tggccatatg	taaacctctc	cactacctga	ccatcatgag	cccaagaatg	420
tgtctatact	tttttagccac	ttcctctatc	attggcctta	tccactcatt	ggtccaatta	480
gtttttgtgg	tagattttacc	tttttgtggt	cctaataatct	ttgacagttt	ttactgtgat	540
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gtcaatagtg	gactcatttc	tgtgggctcc	tttgtcttgc	tggttaattc	ctacactctc	660
attctgttca	ctgtttggaa	acattcttct	ggtgggtctag	ccaaggccct	ctctaccctg	720
tcagctcatg	tactgtgggt	catcttgttc	tttgggccac	tgatgttttt	ctacacatgg	780
ccttctccca	catcacacct	ggataaatat	cttgctatatt	ttgatgcatt	tattactcct	840
tttctgaatc	cagttatcta	cacattcagg	aacaaagaca	tgaaagtggc	aatgaggaga	900
ctgtgcagtc	gtcttgcgca	ttttacaaaag	attttg			936

<210> 658

<211> 980
 <212> DNA
 <213> Unknown (H38g507 nucleotide)

<220>
 <223> Synthetic construct

<400> 658
 atggagcaaa ggaaaaatgt gactgagttt gtccttgtgg ggctcactca gagccccag 60
 ggacagaaaa tattatttct tgtgttcttg ctcatctacg ttgtgacaat ggtaggcaac 120
 atattcattg ttgtgactgt ggtggtcagc ccaacttttg atgccccatg tacttcttcc 180
 ttggctactt atcatttatg gatgctgttc attctactac agttacccca aatatgatta 240
 tagacttact ctatgagaag aaaaccattt cgttccaagc ttgattaccc agatttttat 300
 aggacaccta tttgggggtg ctgagatttt actccttgtt gtcatggcct atgatggcta 360
 cgtgaccatc tgcaaacccc tgcattattt gaccatcatg aaccaacggg tgtgcattct 420
 actgctgctg ttggcctggg ctggaggttt cttgcatgct gtagttcaac ttctttttgt 480
 ttacaacctt cccttctgtg gcccgaatgt cattgaccat ttcactctgtg acatgtaccc 540
 tttattaaaa cttgcctgca ctgacaccta tgttactggc ctcactgtgg ttgccaatga 600
 tggggcaatc tgtgtgggtca tctttatgct cttactcttc tcctatgggg tcattctgca 660
 ctccctgaag aatcttagtc aggaaggagg gcacaaagcc ttatccacct gtggctccca 720
 tatcactgtg gtgacctctc tctttgtccc ttgtattttc atgtatgtga gacctccttt 780
 gaccttacc cttgataaat ccttgactgt gttttacact gttatcacac ctatgttgaa 840
 ccctctaate tatactttta gaaatgcaga gatgaaaaat gctatgaaga agctctggac 900
 tagaaaaaga aaatgagggt gcagacaaat gtatcatcta ttttcagtga agagttgctc 960
 cctccaggaa agccatttgt 980

<210> 659
 <211> 917
 <212> DNA
 <213> Unknown (H38g508 nucleotide)

<220>
 <223> Synthetic construct

<400> 659
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 tgggaacttc aaattttctt ctttgtgaca ttttccttga tctacgggtg tactgtggtg 120
 ggaaacattc tcattatggt cacagtgaac tgtagtctga cccttcattc tcccttgtac 180
 tttctccttg gaaatctctc ttttttggac atgtgtctct cactgcccac aacaccaag 240
 atgatcaca gaccatctct gtgtggggct gcgtgaccca gaagtctctc atgcacttct 300
 ttgggagtgc tgagatgact cttctgataa tcatggcctt tgacagggtat gtagccatat 360
 gtaaacccct gcactatagg acaatcatga gccacaagct gctaaagggg tttgcgatac 420
 tttcatggat aattgggttt ttacactcca taagccagat agttttaaca atgaacttgc 480
 ctttctgtgg ccacaatgtc ataaacaaca tattttgtga tcttcccctt gtgatcaagc 540
 ttgcttgcac tgaaacatac accctggaat tatttgtcat tgctgacagc gggctgctct 600
 ctttcacctg tttcatctct ttgcttgttt cttacattgt catcctggtc agtgtaacca 660
 aaaaatcatc acatgggctc tccaaggcgc tgtccacatt gtctgcccac atcattgtgg 720
 tcaactctgt ctttggacct tgtattttta tctatgtttg gccattcagt agtttggcaa 780
 gcaataaaac tcttgtctga ttttatacag ttatcacacc gttactgaat ccgagtattt 840
 ataccctgag aaataagaaa atgcaagagg ccataagaaa attacgggtc caatatgtta 900
 gttctgcaca gaatttc 917

<210> 660
 <211> 1008
 <212> DNA
 <213> Unknown (H38g509 nucleotide)

<220>
 <223> Synthetic construct

<400> 660

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atccagaatg	acagccgggc	ctcgctgggc	tgttcctgtc	catgtgcctg	gtcacgggtg	120
tggggaacct	gctcatcatc	ctggccgtca	gccctgactc	ccacctccac	acccccatgt	180
acatcttctt	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agatgactgt	ggacatccag	tctcacagca	gagtcattct	ctatgcaggc	tgccctgactc	300
agatgtctct	ctttgccatt	tttggaggca	tggaagagag	acatgttcct	gagtgtgatg	360
gcctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccat	catgaacccg	420
tgttctctgtg	tgcttctagt	tttgttgtct	tttttttttt	ctctcagtct	tttagacgtc	480
cagctgcgca	acttgattgc	cttacaatgt	acctgcttca	aggatgtgga	aattcctaata	540
ttcttctgtg	acccttctca	actcccccat	cttgcattgt	gtgacacctt	caccaataaac	600
ataatcctgt	atttccctgc	tgccatattt	ggttttcttc	ccatcttggg	gacccttttc	660
tcttactata	aaatcggttt	ctccattctg	agggtttcat	catctggttg	gaagtataag	720
gccttctcca	cctgtgtgtc	tcacctgtca	gtggtttgc	gattttatgg	aacaggcggt	780
ggagggtacc	tcagttcaga	tgtgtcatct	tccccgagaa	aggctgcagt	ggcctcagtg	840
atgtacacgg	tggtcacccc	catgctgaac	cccttcatct	acagcctgag	aaacagggat	900
attaaaagtg	tcctgcggcg	gccgcacagc	agcacggtct	aatcttgata	tcttcttata	960
tgttccattc	cttttgtagt	gtgggttaaa	aaaggcagca	aggtcaaa		1008

<210> 661

<211> 957

<212> DNA

<213> Unknown (H38g510 nucleotide)

<220>

<223> Synthetic construct

<400> 661

atgatggaaa	tagccaatgt	gagttctcca	gaagtctttg	tcctcctggg	cttctccaca	60
cgacctcac	tagaaactgt	cctcttcata	gttgtcttga	gtttttacat	ggtatcgatc	120
ttgggcaatg	gcatcatcat	tctgggtctc	catacagatg	tgacctcca	cacacctatg	180
tacttctttc	ttgccaacct	ccccttctctg	gacatgagct	tcaccacgag	cattgtccca	240
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tatgaccgct	acgctgccat	ctgcaggcca	ctccattaca	ctgtcattat	gcatccacag	420
ctttgccttg	ggctagcttt	ggcctcctgg	ctgggggggtc	tgaccaccag	catggtgggc	480
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tacctggcca	gctttgtctt	tgttgtctctg	cctctggggc	tcacctctgt	ctcttacggc	660
cacattgccc	gggctgtgtt	gaagatcagg	tcagcagaag	ggcggagaaa	ggcattcaac	720
acctgttctt	cccacgtggc	tgtgggtgtct	ctgttttacg	ggagcatcat	cttcatgtat	780
ctccagccag	ccaagagcac	ctcccatgag	cagggcaagt	tcatagctct	gttctacacc	840
gtagtcactc	ctgcgtgaa	cccacttatt	tacacctga	ggaacacgga	ggtgaagagc	900
gccctccggc	acatgggtatt	agagaactgc	tgtggctctg	caggcaagct	ggcgcaa	957

<210> 662

<211> 912

<212> DNA

<213> Unknown (H38g511 nucleotide)

<220>

<223> Synthetic construct

<400> 662

atggaaagag	caaaccattc	agtgggtatcg	gaatttattt	tgttgggact	ttccaaatct	60
caaaatcttc	agatttttatt	cttcttggga	ttctctgtgg	tcttcgtggg	gattgtgtta	120
ggaaacctgc	tcactttggg	gactgtgacc	tttgattcgc	tccttcacac	accaatgtat	180
tttctgctta	gcaacctctc	ctgcattgat	atgatcctgg	cttcttttgc	tacccttaag	240
atgattgtag	atttccctccg	agaacgtaag	accatctcat	ggtgggggatg	ttattcccag	300
atgttcttta	tgacctcctc	gggtgggagt	gagatgatgt	tgcttgtagc	catggcaata	360
gacaggtagt	ttgccatatt	caaaccctc	cattacatga	ccatcatgag	cccacgggtg	420
ctcactgggc	tactgttata	ctcctatgca	gttggatttg	tgcactcatc	tagtcaaatg	480

gctttcatgt	tgactttgcc	cttctgtggt	cccaatgtta	tagacagctt	tttctgtgac	540
cttccccctg	tgattaaact	tgcttgcaag	gacacctaca	tcctacagct	cctgggtcatt	600
gctgacagtg	ggctcctgtc	actgggtctgc	ttcctcctct	tgcttgtctc	ctatggagtc	660
ataatattct	cagttaggta	ccgtgctgct	agtcgaccc	ctaaggcttt	ctccactctc	720
tcagctcaca	tcacagttgt	gactctgttc	tttgctccgt	gtgtctttat	ctacgtctgg	780
cccttcagca	gatactcggg	agataaaaatt	ctttctgtgt	tttacacaat	tttcacacct	840
ctcttaaate	ctattattta	tacattaaga	aatcaagagg	taaaagcagc	cattaaaaaa	900
agactctgca	ta					912

<210> 663

<211> 963

<212> DNA

<213> Unknown (H38g512 nucleotide)

<220>

<223> Synthetic construct

<400> 663

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ctcctcatta	tcaccatcat	taccgtggac	cgctgtctcc	attcccccat	gtattacttt	180
ttaaagcacc	tctctcttct	ggacctctgc	ttcatctctg	tcacagtccc	ccagtccatt	240
gcaaattcac	ttatgggcaa	cggttacatt	tctcttggtc	agtgcattct	tcagggttttc	300
ttcttcatag	ctctggcctc	atcagaagtg	gccattctca	cagtgatgtc	ttatgacagg	360
tacgcagcaa	tctgtcaacc	acttcattat	gagactatta	tgatccccg	tgctgtagg	420
catgcagtga	tagctgtgtg	gattgctggg	ggcctctctg	ggctcatgca	tgctgccatt	480
aacttctcca	tacctctctg	tgggaagaga	gtcattcacc	aattcttctg	tgatgttctt	540
cagatgctga	aactagcctg	ttcttatgaa	ttcattaatg	agattgcact	ggctgcattc	600
acaacgtctg	cagcatttat	ctgtttgatc	tccattgtgc	tctcctacat	tcgcatcttc	660
tctacagtgc	tgagaatccc	atcagctgag	ggccggacca	aggtcttctc	cacctgccta	720
ccacacctat	ttgtagccac	cttctttctt	tcagctgcag	gctttgagtt	tctcagactg	780
ccttctgatt	cctcatcgac	tgtggacctt	gtattctccg	tattctatac	tgtgatacct	840
ccaacactca	atccagtcac	ttatagctta	cggaatgatt	ccatgaaggc	agcactgagg	900
aagatgctgt	caaaggaaga	gcttcctcag	agaaaaatgt	gcttaaaagc	catgttttaa	960
ctc						963

<210> 664

<211> 930

<212> DNA

<213> Unknown (H38g513 nucleotide)

<220>

<223> Synthetic construct

<400> 664

atggacccac	agaactattc	cttgggtgtca	gaattttgtgt	tgcatggact	ctgcacttca	60
cgacatcttc	aaaatttttt	ctttatatatt	ttctttgggg	tctatgtggc	cattatgctg	120
ggtaaccttc	tcattttggg	cactgtaatt	tctgatccct	gcttgcactc	ctccccatg	180
tacttctctg	tggggaacct	agctttcctg	gacatgtggc	tggtccctcatt	tgccactccc	240
aagatgatca	gggatttctt	tagtgatcaa	aaactcatct	cctttggagg	atgtatggct	300
caaactcttct	tcttgcactt	tactgggtggg	gctgagatgg	tgctcctggg	ttccatggcc	360
tatgacagat	atgtggccat	atgcaaacc	ttgcattaca	tgactttgat	gagttggcag	420
acttgcatca	ggctgggtgt	ggcttcatgg	gtcgttggat	ttgtgcactc	catcagtcac	480
gtggctttca	ctgtaaattt	gccttactgt	ggccccaatg	aggtagacag	cttcttctgt	540
gacctccctc	tggtgatcaa	acttgcctgc	atggacacct	atgtcttggg	tataattatg	600
atctcagaca	gtgggttgct	ttccttgagc	tgttttctgc	tctcctgat	ctcctacacc	660
gtgatccctc	tcgctatcag	acagcgtgct	gccggtagca	catccaaagc	actctccact	720
tgctctgcac	atatcatggg	agtgcgctg	ttctttggcc	cttgcatttt	tgtttatgtg	780
cggcctttca	gtaggttctc	tgtggacaag	ctgctgtctg	tgttttatac	catttttact	840
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aaactgcaaa	accgacgggt	gactttttcaa				930

<210> 665
 <211> 957
 <212> DNA
 <213> Unknown (H38g514 nucleotide)

<220>
 <223> Synthetic construct

<400> 665
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 aatgaattgc agtttttact attcaccatc ttctttctga cttatttctg tactttggga 120
 ggaaatatat taattatctt gacgactgtg actgatccac acctgcatac acctatgtat 180
 tattttctag ggaacttggc ctttattgac atctgctaca ccaccagcaa tgtcccccag 240
 atgatggtgc acctcctctc aaagaaaaaa agcatttctt atgtggggtg tgtgggttcaa 300
 ctttttgcac ttgttttctt tgtaggatca gagtgtctcc tactggcagc aatggcatat 360
 gatcggtaca ttgcaatctg caatccttta aggtattcag ttattctgag caaggttcta 420
 tgcaatcaat tagcagcctc atgctgggct gctggttctc ttaactcagt ggtgcataca 480
 gtgttgacat tctgcctgcc cttctgtggc aacaatcaga ttaattactt cttctgtgac 540
 atccccctt tctgtactct gtcttgtgga aacacttctg tcaatgagtt ggcactgcta 600
 tccactgggg tcttcattgg ttggactcct ttcccttcta tctgactttc ctacatttgc 660
 ataattctca ccatcttgag gatccagtcc tcagagggaa gacgaaaagc cttttctaca 720
 tgtgcctccc acctggccat tgtctttctc ttttatggca gcgccatctt tacatatgta 780
 cggcccatct caacttactc attaaagaaa gatagggttg tttcagtggt gtacagtgtt 840
 gttaccccca tgctaaacct tataatttac acattgagga ataaggacat caaagaagct 900
 gtcaaaaacta tagggagcaa gtggcagcca ccaatttctt ctttgatag taaactc 957

<210> 666
 <211> 910
 <212> DNA
 <213> Unknown (H38g515 nucleotide)

<220>
 <223> Synthetic construct

<400> 666
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 gtagcatctg ataaatacct gaattcatca cccatgtatt tccttcttgg caacctctca 180
 tttctggacc tatgttatc aacagtaacg acccctaagc ttctggctga cttctttaat 240
 catgaaaaac tcatttctta tgaccaatgc attgtgcaac tcttcttctc gcattttgta 300
 ggggcagctg agatgttctt gctcacagtg atggcgtagc atcgctatgt tgcaatctgt 360
 cgcccgctgc actacaccac tgtcatgagt cgggggttat gctgtgtgtt ggttgctgcc 420
 tcctggatgg gaggatttgt gcactccact gtccagacca ttctcactgt ccatctacct 480
 ttttgtgggc caaatcaggt ggaaaacttt ttttgtgat gttccccctg tcatcaaaact 540
 tgcttgtgct gacacttttg tcattgaatt gctcatggta tctaacagtg ggttgatctc 600
 caccatctcc tttgtggtgc tgatttctc ctacaccact atcctagtca agattcgctc 660
 caaggaagga aggcgaaagg cactctccac gtgtgcctct cactcatgg tggtaacact 720
 gtttttttgg cctgtatatt tcatctacgc tcgtccttct tctacatttt ctgtggacaa 780
 gatggtgtct gtactctaca atgttattac cccaatgcta aacccccctc tctacacact 840
 tcggaacaaa gaggtaaagt cagccatgca gaagctctgg gtcagaaatg ggcttacttg 900
 gaaaaagcag 910

<210> 667
 <211> 945
 <212> DNA
 <213> Unknown (H38g516 nucleotide)

<220>
 <223> Synthetic construct

<400> 667

atggagaatg	tcactacaat	gaatgagttt	cttctacttg	gcctgactgg	tgttcaggag	60
ctgcagcctt	tcttcttttg	gattttctta	atcattttacc	tgataaactt	gatttggaaat	120
ggatctatat	tggtgatggg	tgttttgga	ccacaactcc	actcccctat	gtattttttt	180
ctgggaaacc	tctcttgctt	ggatatttct	tattcttcag	tgacactgcc	caagctgctc	240
gtaaacctcg	tgtgcagtcg	cagggtctata	tcttttctag	gctgtatcac	ccagctacac	300
ttcttccact	ttttgggaag	cacagaggcc	attttactgg	ctatcatggc	ctttgaccgt	360
tttggtgcc	tctgcaatcc	tcttcgctac	actgtcatca	tgaaccccca	gggtgtgatt	420
ctgttggcag	ctgcggcctg	gctcatcagc	ttcttttaag	ctctgatgca	ttctgtcatg	480
actgcacacc	tgagtttttg	tggctctcag	aaactcaatc	acttcttcta	cgatgtcaag	540
ccgctcttag	aattggcctg	tagtgacaca	ttactcaatc	aatggcttct	ttccattgtc	600
acaggcagca	tatccatggg	agctttcttt	ctgactcttc	tctcctgctt	ctatgtaatt	660
ggcttccttc	tgtttaagaa	caggctcctg	agaatactcc	acaaggctct	gtccacttgt	720
gcctcccatt	ttatggtggt	atgtcttttc	tatggacctg	tgggcttcac	atatattcgt	780
cctgcttcag	ccacctccat	gattcaggac	cggataatgg	ccatcatgta	tagcgccgtc	840
accctgtac	tgaatccact	aatctacacc	cttaggaaca	aagaagtgat	gatggctctg	900
aagaaaatct	ttggtaggaa	gttgttttaa	gactggcagc	aacac		945

<210> 668

<211> 966

<212> DNA

<213> Unknown (H38g517 nucleotide)

<220>

<223> Synthetic construct

<400> 668

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agggagctcc	aacctttctt	gtttcttaca	ttttcactac	tttatctagc	aattctgttg	120
ggcaactttc	tcattcatct	cactgtgacc	tcagattccc	gccttcacac	ccccatgtac	180
tttctgcttg	caaacctgtc	atttatagac	gtatgtgttg	cctcttttgc	taccctaaa	240
atgattgcag	actttctggt	tgagcgcaag	actatttctt	ttgatgcctg	cctggcccag	300
attttctttg	ttcatctctt	cactggcagt	gaaatgggtg	tcttagtttc	catggcctat	360
gaccgttatg	ttgctatatg	caaacctctc	cactacatga	cagtcatgag	ccgtcgtgta	420
tgtgttggtg	tcgtcctcat	ttcatgggtt	gtgggcttca	tccatactac	cagccagttg	480
gcattcactg	ttaatctgcc	attttgtggt	cctaataagg	tagacagttt	tttctgtgac	540
cttcctctag	tgaccaagtt	agcctgcata	gacacttatg	ttgtcagctt	actaatagtt	600
gcagatagtg	gctttcttct	tctgagttcc	tttctcctct	tgggtgtctc	ctacactgta	660
atacttggtt	cagttaggaa	tcgctcctct	gcaagcatgg	cgaaggcccc	ctccacattg	720
actgttcaca	tcactgtggt	cacttttatt	tttggaccat	gcattttcat	ctatgtgtgg	780
cccttcagca	gttactcagt	tgacaaaagtc	cttgctgtat	tctacaccat	cttcacgctt	840
attttaaacc	ctgtaatcta	cacgctaaga	aacaaagaag	tgaaggcagc	tatgtcaaaa	900
ctgaagagtc	ggtatctgaa	gcctagtcag	gtttctgtag	tcataagaaa	tgttcttttc	960
ctagaa						966

<210> 669

<211> 594

<212> DNA

<213> Unknown (H38g518 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(594)

<223> n = A,T,C or G

<400> 669

gnncggctac	tactacccat	gtactgtttc	ctgnctatac	tgtccgccac	tgacctcggc	60
ctgtccatat	ccactctggt	caccatgctg	agtatattct	ggttcaatgt	gagggaaatc	120
agctttaatg	cctgcttgct	ccacatgttc	tttattaaat	tcttcactgt	catggaatcc	180

tcagtgtgt	tggccatggc	ttttgatcgt	tttgtggcgg	tctctaatacc	ccttaggtat	240
gccatgattt	taactgactc	cagaatagct	caaattggag	tggcaagtgt	catcaggggg	300
ctcctaatac	tgacaccaat	ggtagcactt	cttataagac	tttcctactg	ccacagcccc	360
agtactccac	cactcctact	gctaccaccc	tgatgtgatg	aagtctcat	gcacagacgc	420
cagaatcaac	agtgcagttg	ggctgactgc	catgttctct	actgggtggg	gtagacttac	480
ttctcatcct	cctttcttat	gttttgatca	ttaggactgt	ccttancgtt	gcttccccag	540
aagagaggaa	ggaaaccctt	cagtacatgt	gtctcccaca	ttgggggctt	ttgc	594

<210> 670

<211> 939

<212> DNA

<213> Unknown (H38g519 nucleotide)

<220>

<223> Synthetic construct

<400> 670

atgagccctg	agaaccagag	cagcgtgtcc	gagttcctcc	ttctgggcct	ccccatccgg	60
ccagagcagc	aggetgtgtt	cttcaccctg	ttcctgggca	tgtacctgac	cacgggtgctg	120
gggaacctgc	tcatcatgct	gtcaccacag	ctggactctc	accttcacac	ccccatgtac	180
ttcttctcca	gccacttggc	tctcactgac	atctcctttt	catctgtcac	tgtccctaag	240
atgctgatgg	acatgcggac	taagtacaaa	tcgatcctct	atgaggaatg	cattttctcag	300
atgtattttt	ttatattttt	tactgacctg	gacagcttcc	ttattacatc	aatggcatat	360
gaccgatatg	ttgccatatg	tcaccctctc	cactacactg	tcatcatgag	ggaagagctc	420
tgtgtcttct	tagtggctgt	atcttggatt	ctgtcttgtg	ccagctccct	ctctcacacc	480
cttctcctga	cccggtgtgc	tttctgtgct	gcgaacacca	tccccatgt	cttctgtgac	540
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acagtagggg	tgggtggtcat	taccctgcc	ttcatgtgta	tcctgggtatc	atatgggtac	660
attggggcca	ccatcctgag	ggtcccttca	accaaaggga	tccacaaagc	attgtccaca	720
tgtggctccc	atctctctgt	ggtgtctctc	tattatgggt	caatatttgg	ccagtacctt	780
ttcccgaactg	taagcagttc	tattgacaag	gatgtcattg	tggctctcat	gtacacgggtg	840
gtcacaccca	tgttgaacct	ctttatctac	agccttagga	acagggacat	gaaagaggcc	900
cttgggaaac	tcttcagtag	agcaacattt	ttctcttgg			939

<210> 671

<211> 586

<212> DNA

<213> Unknown (H38g520 nucleotide)

<220>

<223> Synthetic construct

<400> 671

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atgtgggtact	gcaattgtcca	gagtttcttt	ctcatattct	ctgggagcac	agaagcctgc	180
ctactccttg	ccatggcctg	tgatcactct	acttccaact	gccaccctcg	gctcaacgat	240
gtggttatga	atcagcctgt	ctgtgtcagg	atgggtgattg	cagcatgggc	agtgggattc	300
ctaaactcct	tgacaaagaa	tcttttcatt	tacaacttac	acttctgtgg	ccccagtgtc	360
atccctcact	tctgtgtgta	gctgccttca	ctcttccctc	tctcttgat	tgatccagct	420
gccagtgagg	tccttccctg	tgggtcatgt	acattgctag	gatttgtag	ttgccgctgg	480
tcctcttttc	ttactetaac	accatctctg	cctcctagcc	atgtgktttt	ctgaggggtca	540
aggcaaagcc	ttctccacct	gctctcccca	cctcaccgtg	gtgctt		586

<210> 672

<211> 918

<212> DNA

<213> Unknown (H38g521 nucleotide)

<220>

<223> Synthetic construct

<400> 672

atgagccctg	agaaccagag	cagcgtgtcc	gagttccctc	tcctggggcct	ccccatccgg	60
ccagagcagc	aggccgtgtt	cttcgcctctg	ttcctgggca	tgtacctgac	cacgggtgctg	120
gggaacctgc	tcacatgct	gtcatccag	ctagactctc	accttcacac	ccccatgtac	180
ttcttcctta	gccacttggc	cctcactgac	atctcctttt	catctgtcac	tgccctaag	240
atgctgatga	acatgcagac	tcagcaccta	gccgtctttt	acaagggatg	catttcacag	300
acatatTTTT	tcatatTTTT	tgctgactta	gacagtttcc	ttatcacttc	aatggcatat	360
gacaggtatg	tggccatctg	tcacctctta	cattatgcc	ccatcatgac	tcagagccag	420
tgtgtcatgc	tgggtggctgg	gtcctgggtc	atcgcttgtg	cggtgtgctct	tttgcatacc	480
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cttgggtgcc	tgctcaagtt	gtcctgtctca	gacacctccc	tcaatcagtt	agcaatcttt	600
acagcagcat	tgacagccat	tatgcttcca	ttcctgtgca	tcctgggttc	ttatgggtcac	660
attgggggtca	ccatcctcca	gattccctct	accaagggca	tatgcaaagc	cttgtccact	720
tgtggatccc	acctctcagt	gggtactatc	tattatcgga	caattattgg	tctctatatt	780
cttcccccat	ccagcaacac	caatgacaag	aacataattg	cttcagtgat	atacacagca	840
gtcactccca	tgttgaaccc	attcattttac	agtctgagaa	ataaagacat	taagggagcc	900
ctaagaaaac	tcttgagt					918

<210> 673

<211> 591

<212> DNA

<213> Unknown (H38g522 nucleotide)

<220>

<223> Synthetic construct

<400> 673

ctactactac	cyatgtatTT	ttttcttggc	aacctstccc	tcattggacat	ctgcccgcacc	60
tcctcctttg	tgccctctcat	rttagacaat	ttcctggaaa	cccagaggac	catttccttc	120
cctggctgtg	ccctgcagat	gtacctgacc	ctggcgctgg	gatcaacgga	gtgcccgtctg	180
ctggctgtga	tggcatatga	ccgttatgtg	gctatctgcc	agccgcttag	gtacycagag	240
ctcatgagtg	ggcagacctg	catgcagatg	gcagcgctga	gctggggggac	aggcttttgc	300
aactcactgc	tacagtccat	ccttgtcttg	cacctccctc	tctgtggcca	cgatcatcaac	360
tactttctatg	agatccttggc	agtgtctaaa	ctggcctgtg	gggacatctc	cctcaatgcg	420
ctggcattaa	tgggtggccac	agccgtcctg	acactggccc	ccctcttctg	catctgccc	480
tcttaccttt	tcacctctgtc	tgccatcctt	aggggtaccct	ctgctgcagg	ccgggtgcaaa	540
gccttctcca	cctgtctcagc	ccaccgcaca	gtgggtgggtg	gttttttatgg	g	591

<210> 674

<211> 985

<212> DNA

<213> Unknown (H38g523 nucleotide)

<220>

<223> Synthetic construct

<400> 674

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tcttgggaac	tccaagtctt	ctttttcttt	atcttctctg	tgTTTTatgg	agctgcagtg	120
ttgggaaaca	tccttatcat	catcacagta	attatagact	ctcattttgca	ttccccaatg	180
tactttcttc	ttagcaatct	ctcttccatc	gatgtgtgtc	aggctacatt	tgccactccc	240
aagatgattg	cagacttcct	caacgaacac	aagaccacca	ctttccaggg	atgcatgtca	300
caaattcttt	tcttgcagtg	ttttgggggt	agtgcagatg	tgcttcttgt	tgccatggcc	360
tatgatagat	acattgctat	atgcaaacct	ctgcactaca	tgaccatcat	gaaccggagg	420
gtgtgaactg	ttctgggtgg	ggtttccttg	gccattggca	tctcactc	agccaccac	480
ctggcattca	aagtcaatct	gcctttctgt	ggaccaca	gggtagacaa	ttttttctgt	540
gacctctcc	tagtgatcaa	gcttgccctg	ttagacacct	atgggttttga	gatactgggtg	600
ctcactaaca	gtgggtctgct	ctcacttatg	tgTTTTctcc	ttttgtctcat	ttctgacact	660
atcatccttg	ctactgtgca	tcgccaagcc	tctgatggga	tgtccaaggc	cctttccact	720
ctgtctgccc	acattactgt	tgtgtctctc	ttctttggcc	cattaatatt	catctatatt	780

tggccctttg	aaagcttccc	aattgataaa	tttatctctg	tgttttttta	ctgtcttcac	840
tcctctcctt	aaccccatga	tttatactct	gaggaataaa	gatataaagg	aagccatgag	900
gaagctaagg	agatgacatg	tgggttccaa	gcagggtttt	tagacaacta	caaagaagta	960
atacaaattc	ctacttttgg	gctttt				985

<210> 675

<211> 780

<212> DNA

<213> Unknown (H38g524 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(780)

<223> n = A,T,C or G

<400> 675

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cccaagatgc	tgatgaactt	cctgtcagaa	aagaagacca	tctcctatgc	tgggtgtctg	120
acacagtatg	tattttctct	atgccttggg	caacagtgc	agctgccttc	tttcgtaant	180
gcctttgacc	gctatgttgc	cgtctgtgac	cctttccact	atgtcaccac	catgagccac	240
caccactgtg	ttctgctggg	ggccttctcc	tgctcattta	cttaccttca	ctcactcctg	300
cacacacttc	tgctgaatcg	tctcaccttc	tgtgactcca	atgttatcca	ccactttctc	360
tgtgacctca	gccctgtgct	gaaattgtcc	tgctcttcca	tatttgcata	tgaaattgtg	420
catgatgacg	aagcacctat	tgttttgggt	actcgttttc	tctgcattgc	tttctcttat	480
atacgaatcc	tcactacagt	tctcaagatt	ccctctactt	ctgggaaacg	caaagccttc	540
tccacctgtg	gtttttacct	caccgtgggt	acgctctttt	atggaagcat	cttctgtgtc	600
tatttacagc	ccccatccac	ctacgtgtgc	aaggaccacg	tggcaacaat	tgtttacaca	660
gttttgcctc	ccatgctcaa	tccttttatc	tacagcctga	gaaacaaaga	cctgaaacag	720
ggcctgagga	agcttatgag	caagagatcc	taggaagcac	cctcttgaaa	aactcgttaag	780

<210> 676

<211> 576

<212> DNA

<213> Unknown (H38g525 nucleotide)

<220>

<223> Synthetic construct

<400> 676

tactactact	accctatgta	tttttttctt	tgcaacctgt	ccttcctgga	catgagcttc	60
accacgagca	ttgtcccaca	gctcctgggt	aacctctggg	gaccacagaa	aaccataagc	120
tatggagggt	gtgtgggtcca	gttctatata	tcccatgggc	tgggggcaac	cgagtgtgtc	180
ctgctggcca	ccatgtccta	tgaccgctac	gctgccatct	gcaggccact	ccattacact	240
gtcattatgc	atccacagct	ttgccttggg	ctagctttgg	cctcctgggt	ggggggctg	300
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atcgaccact	tcttttgcga	gatgccccct	attatgcaac	tggcttgtgt	ggataccagc	420
ctcaatgaga	tgggagatgt	acctggccag	ctttgtcttt	gttgctctgc	ctctggggct	480
catcctgggt	tcttacggcc	acattgccgg	gccgkgttga	agaacaagtc	agcagaaggg	540
cggagaaagg	cattcaacac	ctgttctttc	caagctg			576

<210> 677

<211> 929

<212> DNA

<213> Unknown (H38g526 nucleotide)

<220>

<223> Synthetic construct

<400> 677

atggatataa	gaaacagctc	aataataatc	tgagtttgtt	ttggttagaat	tcatcagcac	60
ttgggaactt	gaaattttgt	ttcttaaata	ttttgttgg	cctatgcagc	aatcatggca	120
ggaaacctca	ctgcaatcgc	tgtaacctcc	aatcctcccc	tttgctcaac	acctatgtac	180
ttcctccttg	gaaatctctc	ctttctcagt	atgtttattt	ccacagtcac	aatctctaag	240
atggtccaga	cgttctcagg	gagaataaaa	ccacttcctc	atggggctgt	atggctcaga	300
tctccacttc	ttaggaggca	gtgagatgac	tcttctcata	tttatggctg	ttgatcagca	360
cattgcaata	tgcagacctc	ttcactgcag	aaccatcacg	aactgcaggg	tactcatggc	420
cactcatggg	ctctgtgctg	ctatcacggg	ctgttggttt	tgtgcatact	ataagccaga	480
ttgtttttat	tatcaccttg	cccttctgtg	gccccagtg	ggtggacaat	ttattttgag	540
accttcctct	agttctgaag	cttgccctgca	ctgagactta	tgatctggag	ttgctggtaa	600
ttgctaaaag	tggacagttg	tctttcatct	gcttcatagt	cttgctcatt	ttctacacta	660
ttattctggg	aactgtgcag	catcgatcct	ctgatgcact	ctccaaggct	ctgtccacac	720
tgtctgctca	tactactgca	gtcactctat	ttttatgagc	catgtgtcta	catttacact	780
tggccattta	ggagcttttc	agtggataca	tttctttctg	tgttttattc	agttacacc	840
ttactgaacc	ccattactta	cagtctgaga	tgaaagcatc	tatacatcaa	ctgaggacc	900
aacacatcat	ctccagacaa	accttctct				929

<210> 678

<211> 595

<212> DNA

<213> Unknown (H38g527 nucleotide)

<220>

<223> Synthetic construct

<400> 678

ctactactac	ccatgtattt	ttttctgtgc	aacctgtccc	tggtggactt	tggttattcc	60
tcagctgtca	ctcccaaggt	gatgggtggg	tttctcacag	gagacaaatt	catattatat	120
aatgcttggt	ccacacaatt	cttcttcttt	gtagccttta	tcactgcaga	aagtttcctc	180
ctggcatcaa	tggcctatga	ccgctatgca	gcattgtgta	aacccttgca	ttacaccacc	240
accatgacaa	caaatgtatg	tgtctgcctg	gccataggct	cctacatctg	tggtttcctg	300
aatgcatcca	ttcatactgg	gaacactttc	aggtctcctc	tctgtagatc	caatgtagtt	360
gaacactttt	tctgtgatgc	tcctcctctc	ttgactctct	catgttcaga	caactacatc	420
agtgagatgg	ttattttttt	ttgtgggtgg	attcaatgac	ctcttttcta	tcctggtaat	480
cttgatctcc	tacttattta	tatttatcac	catcatgaag	atgcgctcac	ctgaaggacg	540
ccagaaggcc	ttttctactt	gtgcttccca	ccttactgca	gtttccatct	tttat	595

<210> 679

<211> 945

<212> DNA

<213> Unknown (H38g528 nucleotide)

<220>

<223> Synthetic construct

<400> 679

atggaggcca	tgaactatt	aatcaatct	caagtgtcag	aattcatttt	gctgggactg	60
accagctccc	aggatgtaga	gtttcttctc	tttgccctct	tctcggttat	ctatgtgggc	120
acagtttttg	gtaaccttct	tattatagtc	acagtgttta	acaccctaa	cctgaataact	180
cccatgtatt	ttctccttgg	taatctctct	ttttagata	tgacccttgc	ttcttttgcc	240
acccctaagg	tgattctgaa	cttggttaaaa	aagcagaagg	taatttcttt	tgctgggtgc	300
ttcactcaga	tatttctcct	tcacttactg	ggtgggttgg	aaatgggtact	gttgggtctcc	360
atggcttttg	acagatatgt	ggccatttgt	aagcccttac	actacatgac	catcatgaac	420
aagaagggtat	gtgttttgct	tgtagtgacc	tcatggctct	tgggtctcct	tcactcaggg	480
tttcagatac	tatttgctgt	gaacttgccc	ttttgtggtc	ccaatgtggg	agacagcatt	540
ttttgtgacc	tccttttggg	tactaagctt	gcctgtatag	acatatattt	tgtacaggta	600
gtcattgttg	ccaacagtgg	cataatctcc	ctgagctgtt	tcattatttt	gcttatctcc	660
tacagtctga	tcctcataac	cattaagaac	cactctccta	ctgggcaatc	taaagcccg	720
tccactttga	ctgctcacat	cacagtgggt	attctcttct	ttggcccatg	catctttatc	780
tacatttggc	ccttcggcaa	ccactctgta	gataagttcc	ttgctgtgtt	ttataccatc	840
atcactccta	tcttgaatcc	aattatctat	actctgagaa	acaaagaaat	gaagatatcc	900

atgaaaaaac tctggagagc ttttgtgaat tctagagaag atact

945

<210> 680

<211> 951

<212> DNA

<213> Unknown (H38g529 nucleotide)

<220>

<223> Synthetic construct

<400> 680

atggagcccc	aaaatacctc	caactgtgact	aactttcagc	tgtaggatt	ccagaacctt	60
cttgaatggc	aggccctgct	ctttgtcatt	ttctgtctca	tctactgcct	gaccattata	120
gggaatgttg	tcatcatcac	cgtggtgagc	cagggcctgc	gactgcactc	ccctatgtac	180
atgttctctc	agcatctctc	ctttctggag	gtctggtaca	cgtccaccac	tgtgccccct	240
ctcctagcca	acctgctgtc	ctggggccaa	gccatctcct	tctctgcctg	catggcacag	300
ctctacttct	tcgtattcct	cggcgccacc	gagtgttttc	tcctggcctt	catggcctat	360
gaccgttacc	tggccatctg	cagccaccct	cgtaccctt	ttctcatgca	tcgtgggcta	420
tgtgccagg	tgggtgtggt	ctcatggtgc	acaggggtca	gcacaggctt	tctgcattcc	480
atgatgattt	ccagggttga	cttctgtggg	cgcaatcaga	tttaaccattt	cttctgcgac	540
ctcccgccac	tcatgcagct	ctcctgttcc	agagtttata	tcaccgaggt	gaccatcttc	600
atcctgtcaa	ttgcctgtgt	gtgcatttgt	ttttttctga	caactggggc	ctatgttttc	660
attgtgtcct	ccatattgag	aatcccttcc	acctctggcc	ggagaaagac	cttttccaca	720
tgtggctccc	acctggctgt	tgtcactctc	tactacggga	ccatgatctc	catgtatgtg	780
tgtcccagtc	cccacctgtt	gcctgaaatc	aacaagatca	tttctgtctt	ctacactgtg	840
gtcacaccac	tgctgaacc	agttatctac	agcttgagga	acaaagactt	caaagaagct	900
gttagaaaagg	tcatgagaag	gaaatgtggt	attctatgga	gtacaagtaa	a	951

<210> 681

<211> 1005

<212> DNA

<213> Unknown (H38g530 nucleotide)

<220>

<223> Synthetic construct

<400> 681

tctacagacc	cacagaatct	aacagatgtc	tctatatctc	tcctcctaga	agctcagagg	60
atccagaatg	gcagccgggc	ctcaactggc	tgtgcctgtc	catgtgcctg	gtcacgggtg	120
tggggaacct	gtcatcatc	ctggcgtca	gccctgactc	ccacctccac	atccccatgt	180
acttcttctc	ctccaacctg	tccttgcttg	acatcggttt	cacctccacc	acgggtcccca	240
agatgattgt	ggacatccag	tctcacagca	gagtcacttc	ctacgcaggc	tgcctgactc	300
agatgtctct	ctttgccatt	tttgaggca	tggagagag	acatgtctct	gagtgtgata	360
gcctatgagc	ggtttgtagc	catctgtcac	cctctatatc	attcagccat	catgaaccca	420
tgtttctgtg	gctttctagt	tttgttgtct	tttttttttt	ctcagtcttt	tagacgcca	480
gctgcacaac	ttgattgcct	tacaaaggac	ctgcttcaag	gatgtggaaa	ttcctaattt	540
cttctgtgac	ccttctcaac	tccccatctt	gcattattgt	gcaccttcac	caataacata	600
atcatgtatt	tccttgccgc	catatttggg	tttcttccca	tctcggggac	gcttttctct	660
tacgataaaa	ttgttttctc	cattctaagg	gtttcatcat	caggtgggaa	gtataaggcc	720
ttctccacct	gtgggtctca	cctgtcagtt	gtttgtgat	tttatggaa	aggcattgga	780
ggctacctca	gttcagatgt	gtcatcttcc	ccgagaaagg	ctgcagtggc	ctcagtgatg	840
tacacgggtg	tcatccccat	gccgaacccc	ttcatctaca	gcctgagaaa	cagggatatg	900
aaaagtgtcc	tgcagcgcc	acatggcagc	acgatctcat	ctcaatatct	tcttatttgt	960
tccattcctt	ttgtagtgtg	gggttaaaaa	ggcagcaagg	tcaaa		1005

<210> 682

<211> 990

<212> DNA

<213> Unknown (H38g531 nucleotide)

<220>

<223> Synthetic construct

<400> 682

cacacagagc	cacagaatct	cacaggtatc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagccggt	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacggtg	120
ctgaggaacc	tgctcagcac	cctggctgtc	agctctgact	ccccctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcggtt	tcaccttggc	catagtctcc	240
aagatgactg	tggacatgca	gtctcatagc	agagtcactc	ctcatgcggg	ctgcctgaca	300
cagatgtctt	tcttggctct	ttttgcatgt	atagaagaca	tggtcctgac	tgtgatggcc	360
tatgacagat	ttgtagccat	ctgtcgccct	ctttactacc	cagtcacatc	aaatcctcac	420
ctctgtgtct	tcttcgtttt	ggtgtccttt	ttccttagcc	tggtggattc	ccagctgcac	480
agttggattg	tgtgacaatt	cacctctccc	aagaatgtgg	aaatctctaa	ttttgtctgt	540
gagccatctc	aacttctcta	ccttgccctgt	tctgacagca	tcataaatag	catattcata	600
tattttgata	gtactatggt	tgggttttct	cccatattcaa	ggatcctttt	gtcttactat	660
aaaattgtcc	cctccattct	aaggatttca	tcgtcagatg	ggaagtataa	agccttcacc	720
acctgtggct	ctcacctagc	agttgtttgc	ttatttgatg	gaacaggcat	tggcatgtac	780
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gtggtcaccc	ccatgctgaa	ccctttcacc	tacagcctga	gaaacaggga	cattcaaaac	900
accctgtgga	ggctgcgcag	cagaagagtg	gaatctcatg	atctgttcca	tccttttttt	960
gtgtgggtga	gaaaggggcaa	ccacattaaa				990

<210> 683

<211> 1005

<212> DNA

<213> Unknown (H38g532 nucleotide)

<220>

<223> Synthetic construct

<400> 683

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atccagaacg	gcagctgggt	ccttgctggg	tggtcctgtc	catgtgcctg	gtcacgggtg	120
tggggaaacct	gtcatcatc	ctggcctgca	gccctgactc	ccacctccac	acccccatgt	180
actttcttct	ctccaacctg	tccttgccctg	acatcggttt	cacctccacc	acgggtcccca	240
agttgattgt	ggacatccaa	tcttacagca	gagtcactct	ctatgcaggc	tgccctgactc	300
agacgtctct	ctttgccatt	tttgaggcca	tgggaagagag	acatgctcct	gagtgtgatg	360
gtctatgacc	ggtttgtagc	catctgtcac	cctctatata	attcagccgt	catgaacccc	420
tgtttctgtg	gctttctagt	tttgtgtctc	tttttttttc	tcagtctttt	agacgccag	480
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ttcgccacct	gtgggtctca	cctgtcagtc	gtttgctgat	tttatggaa	aggcgttgga	780
gggtacctca	gttcagatgt	gtcatcttcc	ccgagaaagg	ctgcggtggc	ctcagtgatg	840
tacactgtgg	tcacccccat	gctgaacccc	ttcatctaca	gcctgagaaa	cagggatact	900
aaaagtgtcc	tgcggcggcc	gcacggcagc	acgggtgta	cttgatatct	tcttatctgt	960
tccattcctt	ttgtagtgtg	ggttaaaaaa	ggcagaaagg	tcaaa		1005

<210> 684

<211> 960

<212> DNA

<213> Unknown (H38g533 nucleotide)

<220>

<223> Synthetic construct

<400> 684

cacacagagc	cacggcatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagcctgt	cctcgctggg	ctgtccctgt	ccatgtatct	ggtcacagtg	120
ctaaggaacc	tgctcatcat	cctggctgtg	agctctgact	cccacctcca	cacccccatg	180
tacttcttcc	tctccaacct	gtgctgggct	gacatcagtt	tcacctcggc	cacggttccc	240

aagatgacgg	tggacatgca	gtcgcatagc	agagtcacat	cttatgcggg	ctgcctgaca	300
cggatgtctt	tcttcgtcct	ttttgcatgt	atagaagaca	tgtcctcgac	tgtgatggcc	360
taggactgct	ttgtagccat	ctgtcgccct	ctgcactacg	cagtcacgt	gaatcctcac	420
ctctgtgtct	tcttagtttt	ggtgtccttt	ttccttagcc	tgttggattc	ccagctgcac	480
agttagattg	tgttacaatt	caccttcctt	aagaatgtgg	aaatctctca	ttttgtctgt	540
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acctgtggct	ctcacctggc	agttgtttgc	ttattttatg	gaacaggcat	tggcgtgtac	780
ctgacttcag	ctgtggcacc	accccccagc	aatgggtgtg	tggcatcagt	gaagtacacc	840
gtggtcaccc	ccatgctgaa	cccttttcac	tacagcctga	gaaacaggga	cattcaaagc	900
acctgtgga	ggctgtgcag	cagaacagtt	aaatctcttg	atctgttcca	ttctttttct	960

<210> 685

<211> 982

<212> DNA

<213> Unknown (H38g534 nucleotide)

<220>

<223> Synthetic construct

<400> 685

atttccttct	ttttctgggt	ccttctcttg	gtcattttcta	gagtttttgg	agccatggca	60
tgaggaaaca	gcactgaagt	gactgaattc	tgtcttcttg	gatttggtgc	ctagcaagag	120
ttttggtgta	tcttcttcat	tatatctctt	ctcatctatg	tgacctccat	aatgggtaat	180
agtggataaa	tcttactcat	caacacagat	tccagatttc	aaacacccat	gtactttttt	240
ctacaacatt	tggcttttgt	tgatatctgt	tacacttctg	ctatcactcc	caagatgctc	300
caaagcttca	cggagaagaaa	gaatttgata	tcatttttgg	gctgcatgat	acaattattg	360
gtttatgcaa	catttgcaac	cagtgactgt	tatctcctgg	ctatgatagc	agtggaccat	420
tatgttgcaa	tctgtaagcc	ccttcaactat	accgtaatca	cgtcccaaac	agtctgcac	480
catttggtag	ctgggttcata	catcatgggc	tcaataaatg	cctctgtaca	tacaggtttt	540
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tcatttcta	aattcccagg	agaatatgaa	agtggcctct	atattttatg	gcactgttat	900
tcccatgttg	aatcctttaa	tctatagctt	gagaaataag	gaagtaaaaag	aagctttaa	960
attgataggg	aaaaagttct	tt				982

<210> 686

<211> 927

<212> DNA

<213> Unknown (H38g535 nucleotide)

<220>

<223> Synthetic construct

<400> 686

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catgagtttt	ggtgtatect	cttcattgta	ttccttctca	tctatgtgac	ctccataatg	120
ggtaatatgtg	gaataatctt	actcatcaac	acagattcca	gatttcaaac	actcacgtac	180
ttttttctac	aacatttggc	ttttgttgat	atctgttaca	cttctgctat	cactcccaag	240
atgctccaaa	gcttcacaga	agaaaagaat	ttgatgttat	ttcagggtcg	tgtgatacaa	300
ttcttagttt	atgcaacatt	tgcaaccagt	gactgttatc	tcctggctat	gatggcagtg	360
gateccttat	ttgccatctg	taagcccctt	cactatactg	taatcatgtc	ccgaacagtc	420
tgcacccgtt	tggtagctgg	ttcatacatc	atgggctcaa	taaatgcctc	tgtacaaaca	480
ggttttacat	gttcactgtc	cttctgcaag	tccaatagca	tcaatcactt	tttctgtgat	540
gttcccccta	ttcttgcctc	ttcatgctcc	aatgttgaca	tcaacatcat	gctacttggt	600
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tgtgcttccc	acctgaccgc	agtcaccatt	ttctatggga	cactctctta	catgtatttg	780
cagtctcatt	ctaataattc	ccaggaaaat	atgaaagtgg	cctttatatt	ttatggcaca	840
gttattccca	tgttaaatcc	tttaattctat	agcttgagaa	ataaggaagt	aaaagaagct	900
ttaaaagtga	tagggaaaaa	gttatttt				927

<210> 687

<211> 894

<212> DNA

<213> Unknown (H38g536 nucleotide)

<220>

<223> Synthetic construct

<400> 687

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ggaaatattg	gaatgatctt	actcatcaag	accgattcca	gacttcaaac	acccatgtac	180
ttttttccac	aacatttggc	ttttgttgat	atctgttata	cttctgctat	cactcccaag	240
atgctccaaa	gcttcacaga	agaaaataat	ttgataacat	ttcggggctg	tgtgatacaa	300
ttcttagttt	atgcaacatt	tgcaaccagt	gactgttacc	tcctagctat	tatggcaatg	360
gattgttatg	ttgccatctg	taagcccctt	cgctatccca	tgatcatgtc	ccaaacagtc	420
tacatccaac	tcgtagctgg	ctcatatatt	ataggtccaa	taaatgcctc	tgtacataca	480
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attatggtea	ccatcctgaa	gatgtcttct	actgctggga	ggaaaaaatc	cttctccaca	720
tgtgcttccc	acctgacagc	agtaaccatt	ttctatggga	cactctctta	catgtactta	780
cagcctcagt	ctaataattc	tcaggagaat	atgaaagtag	cctctatatt	ttatggcact	840
gttattccca	tgttgaatcc	tttaattctat	agcttgagaa	ataaggaagg	aaaa	894

<210> 688

<211> 444

<212> DNA

<213> Unknown (H38g537 nucleotide)

<220>

<223> Synthetic construct

<400> 688

acgtacgacg	gcgcgagggg	ggctcttgta	ttgtttctta	caatacatgc	aaatctacaa	60
tgatgtcaat	aaaaattcaa	ttaaaaatac	atgtagtaaa	aatagttgct	aatctatgct	120
ggagtttact	tgaatgtcac	tatgctgac	gtcaccctca	agtacacaca	tatcttccat	180
catcctgagc	ttgccctctg	ctatgtgtct	ttttccgcag	ttgtcttcca	cctgacagct	240
gtcaccattt	tctttggagc	tctctcttac	atggacttac	aacctgaatc	tactgtgttt	300
caagagcaag	aaaagccagc	atccatattt	tgtggcatta	tgactctcgt	gttaaacttc	360
cttatctact	gcctgtgaaa	ttaggaagta	aaagaagctc	tacagttaac	aaggaaaaag	420
tattaataca	tgtagactga	gggt				444

<210> 689

<211> 888

<212> DNA

<213> Unknown (H38g538 nucleotide)

<220>

<223> Synthetic construct

<400> 689

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gtcaccatgg	tggggaacct	gtcattatc	ctggccatca	gctctgaccc	acacctccat	120
actcccatgt	acttctttct	ggccaacctg	tcattaactg	atgcctgttt	cacttctgcc	180
tccatcccca	aaatgctggc	caacattcat	acccagagtc	agatcatctc	gtattctggg	240

tgtcttgcac	agctatattt	cctccttatg	tttgggtggc	ttgacaactg	cctgctggct	300
gtgatggcat	atgaccgcta	tgtggccatc	tgccaaccac	tccattacag	cacatctatg	360
agtccccagc	tctgtgcact	aatgctgggt	gtgtgctggg	tgctaaccac	ctgtcctgcc	420
ctgatgcaca	cactgttgct	gaccgcgtg	gctttctgtg	cccagaaagc	catccctcat	480
ttctattgtg	atcctagtgc	tctcctgaag	cttgccctgt	cagataccca	tgtaaacgag	540
ctgatgatca	tcaccatggg	cttgctgttc	ctcactgttc	ccctcctgct	gatcgtcttc	600
tcctatgtcc	gcattttctg	ggctgtgttt	gtcatctcat	ctcctggagg	gagatggaag	660
gccttctcta	cctgtgggtc	tcattctcag	gtggttctgc	tcttctatgg	gtctcttatg	720
gggtgtgtatt	tacttcctcc	atcaacttac	tctacagaga	gggaaagtag	ggctgctgtt	780
ctctatatgg	tgattattcc	cacgctaaac	ccattcattt	atagcttgag	gaacagagac	840
atgaaggagg	ctttgggtaa	actttttgtc	agtggaaaaa	cattcttt		888

<210> 690

<211> 939

<212> DNA

<213> Unknown (H38g539 nucleotide)

<220>

<223> Synthetic construct

<400> 690

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ccagagcagc	aggctgtgtt	cttcaccctg	ttcttgggca	tgtacctgat	cacggtgctg	120
gggaacctgc	tcateatcct	gtcatcccg	ctggactctc	accttcacac	ccccatgttc	180
ttcttcctca	gccacttggc	tctcactgac	atctcccttt	catctgtcac	tgtcccaaag	240
atgttattaa	gcacgcaaac	tcaggatcaa	tccattcttt	atgcagggtg	tgtaactcag	300
atgtattttt	tcataatttt	cactgatcta	gacaatttcc	ttctcacttc	aatggcatac	360
gatcggtatg	tggccatctg	tcacccctc	cgctacacca	ctatcatgaa	agagggactg	420
tgtaacttac	tagtcactgt	gtcctggatc	ctctcctgta	ccaatgccct	gtctcacact	480
ctcctcctgg	cccagctgtc	cttttgtgct	gacaacacca	tccccattt	cttctgtgat	540
cttgttgccc	tactcaagct	ctcatgtcga	gacatctccc	tcaatgagct	ggtcattttc	600
acagtgggac	aggcagtcac	tactctacca	ctaatacgca	tcttgatctc	ttatggccac	660
attggggcca	ccatcctcaa	ggctccatct	actaaggcca	tcttcaaagc	tttgtccacc	720
tggtgctctc	acctctctgt	gggtgtctctg	tattatggca	caattattgg	actgtatttt	780
ctccccctcat	ccagtgcctc	cagtgacaag	gacgtaattg	cctctgtgat	gtacacgggtg	840
atcaccccat	tgttgaatcc	cttcatttat	agcctaagga	acagggacat	aaagggagcc	900
ctggagagac	tcttcaacag	ggcaacagtc	ttatctcaa			939

<210> 691

<211> 933

<212> DNA

<213> Unknown (H38g540 nucleotide)

<220>

<223> Synthetic construct

<400> 691

atggaaaacc	aatccagcat	ttctgaattt	ttcctccgag	gaatatcagc	gcctccagag	60
caacagcagt	ccctcttcgg	aattttcctg	tgtatgtatc	ttgtcacctt	gactgggaac	120
ctgctcatca	tcctggccat	tggtcttgac	ctgcacctcc	acacccccat	gtactttttc	180
ttggccaacc	tgtcttttgt	tgacatgggt	ttaacgtcct	ccacagttac	caagatgctg	240
gtgaatatac	agactcggca	tcacaccatc	tcctatacgg	gttgccctcac	gcaaagtgtat	300
ttctttctga	tgtttgggtg	tctagacagc	ttcttctcgg	ctgccatggc	gtatgaccgc	360
tatgtggcca	tttgccaccc	cctctgctac	tcacagtcga	tgaggcccca	agtctgtgcc	420
ctaattgctt	cattgtgctg	ggctcctacc	aatatcggtg	ccctgactca	caggttcctc	480
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cctgtcctga	agctgtcatg	ttctgacacc	cacatcaacg	agatgatgg	ttttgtcttg	600
ggaggcaccg	tactcatcgt	ccccctttta	tgcattgtca	cctcctacat	ccacattgtg	660
ccagctatcc	tgagggtccg	aaccgcgtgg	gggggtggga	aggccttttc	cacctgcagt	720
tcccacctct	gcgttggttg	tgtgttctat	gggacctctc	tcagtgccta	cctgtgtcct	780
ccctccattg	cctctgaaga	gaaggacatt	gcagcagctg	caatgtacac	catagtgtg	840

cccatgttga acccctttat ctatagccta aggaacaagg acatgaaggg ggccctaaag 900
aggctcttca gtcacaggag tattgtttcc tct 933

<210> 692

<211> 945

<212> DNA

<213> Unknown (H38g541 nucleotide)

<220>

<223> Synthetic construct

<400> 692

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gcaactggcg	ttctcctctg	tggactcttc	tctgtcttct	atacactcac	cctgctgggg	120
aatggggtca	tctttgggat	tatctgcctg	gactctaagc	ttcacacacc	catgtacttc	180
ttcctctcac	acctggccat	cattgacatg	tcctatgctt	ccaacaatgt	tccaagatg	240
ttggcaaacc	taatgaacca	gaaaagcacc	atctcctttg	ttccatgcat	aatgcagact	300
tttttgtatt	tggcttttgc	tggtacagag	tgcttgattt	tggtggtgat	gtcctatgat	360
aggatgtgg	ccatctgcca	ccctttccag	tacactgtca	tcattgagctg	gagagtgtgc	420
acgatcctgg	cctcaacatg	ctggataatt	agctttctca	tggctctggt	ccatataact	480
catattctga	ggccgccttt	ttgtggccca	caaaagatca	accactttat	ctgtcaaata	540
atgtccgtat	tcaaattggc	ctgtgctggc	cctaggctca	accagggtgg	cctatatgcg	600
ggttctgcgt	tcacgttaga	ggggccgctc	tgcttgagac	tggtctccaa	cttgcacatc	660
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gctccttccc	acctttgcat	ggtgggactc	ctttttggca	gcaccatggg	catgtacatg	780
gcccccaagt	cccgccaccc	tgaggagcag	cagaaggctc	tttccctggt	ttacagcctt	840
ttcaaccgga	tgctgaaccc	cttgatctac	agcctgagga	acgcagaggt	caagggtgcc	900
ctgaaaagag	tggtgtggaa	acagagatca	aagtgaggga	tgcca		945

<210> 693

<211> 575

<212> DNA

<213> Unknown (H38g542 nucleotide)

<220>

<223> Synthetic construct

<400> 693

ttgaagggtt	attaaaaggc	aatatgagtg	cagaagcaag	gtaagttttt	tgtaataatt	60
ttttgttaat	aatgtgaaat	gtaaggaaaa	aatatacaac	tttaagtttc	tgactgtcct	120
gctagaaact	agttttgccc	tgacgcgacc	cctctgtggg	aatctcattg	atgacaagtg	180
aaattctgga	agtgtctaaag	ttagtttgct	caagttcact	gctcatggat	atgatcatga	240
tggtgggtca	acattcttct	cttgccaatt	ccaatgtact	tatttataac	tatgtgctct	300
gtaatcttat	ttttaaaagag	atcttatggg	aatcttccaa	gggagtttag	tttctgcatt	360
tcctggatat	atgggttttc	gtatattgcc	tggtctataat	ttttagagct	ctttacaaac	420
tcacaaagat	atggggctca	acaatgaatg	aaattgtacg	gtggatgtat	tagtattaaa	480
cgtattagta	ttaaattgtg	tgacataaac	tggtctctta	atataatcac	aaattagtat	540
ctacaatgct	tcaagcattg	ttgtcctttt	tgaaa			575

<210> 694

<211> 942

<212> DNA

<213> Unknown (H38g543 nucleotide)

<220>

<223> Synthetic construct

<400> 694

atggctgaag	aaaatcatat	catgaaaaat	gagtttatcc	tcacaggatt	tacagatcac	60
cctgagctga	agactctgct	gtttgtgggtg	ttcttttgcca	tctatctgat	caccgtgggtg	120
gggaatatta	gtttgggtggc	actgatattt	acacaccgct	ggcttcacac	accaatgtac	180

atctttcttg	gaaatctggc	tcttgtggat	tcttgcctgt	cctgtgctat	tacccccaaa	240
atgttagaga	acttcttttc	tgagaacaaa	aggatttccc	tctatgaatg	tgagtagacag	300
ttttattttc	tttgcactgt	ggaaactgca	gactgctttc	ttctggcagc	aatggcctat	360
gaccgctatg	tgcccatatg	caacccactg	cagtaccaca	tcatgatgtc	caagaaactc	420
tgcatcaga	tgaccacagg	ggccttcata	gctggaaacc	tgcatcccat	gattcatgta	480
gggcttgtat	ttaggttagt	tttctgtgga	tcgaatcaca	tcaaccactt	ttactgtgat	540
attcttccct	tgtatagact	ctcttgtgtt	gacccctata	tcaatgaact	ggttctattc	600
atcttctcag	gttcagttca	agtctttacc	ataggtagtg	tcttaatatc	ttatctctat	660
attcttctta	ctattttcaa	aatgaaatcc	aaagagggaa	gggccaagc	tttttctacc	720
tgtgcatccc	actttttgtc	agtttcatta	ttctatggat	ctcttttctt	catgtacgtt	780
agaccaaatt	tgcttgaaga	aggggataaa	gatataccag	ctgcaatttt	atttacaata	840
gtagttccct	tactaaatcc	tttcatttat	agcctgagaa	atagggaagt	aataagtgtc	900
ttaagaaaaa	ttctgatgaa	agaaataatc	tcaagaagat	gg		942

<210> 695

<211> 948

<212> DNA

<213> Unknown (H38g544 nucleotide)

<220>

<223> Synthetic construct

<400> 695

atgcaaggag	aaaacttcac	catttgggagc	atTTTTTtct	tggagggatt	ttcccagtag	60
ccagggttag	aagtggttct	cttcgtcttc	agccttgtaa	tgtatctgac	aacgctcttg	120
ggcaacagca	ctcttatttt	gatcactatc	ctagattcac	gccttaaaac	ccccatgtac	180
ttattccctg	gaaatctctc	tttcatggat	atTTgttaca	catctgcctc	tgttcctact	240
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gaccgttatg	tggccatttg	taacccgctg	agatactcca	tcatcatgaa	caggtgcgtc	420
tgtgcacgga	tggccacggt	ctcctgggtg	acgggttgcc	tgaccgctct	gctggaaacc	480
agttttgccc	tgcagatacc	cctctgtggg	aatctcatcg	atcacttcac	gtgtgaaatt	540
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gtcagcatte	tcctcttgcc	aattccaatg	ctcttagttt	gcatctctta	catcttcate	660
ctttccacta	ttctgagaat	cacctcagca	gagggaagaa	acaaggcttt	ttctacctgt	720
ggtgcccatt	tgactgtggt	gattttgtat	tatggggctg	ccctctctat	gtacctaaag	780
ccttcttcat	caaatgcaca	aaaaatagac	aaaatcatct	cgttgcttta	cggagtgcct	840
accctatgt	tgaaccccat	aatttacagt	ttaagaaaca	aggaagtcaa	agatgctatg	900
aagaaattgc	tgggcaaaat	aacattgcat	caaacacacg	aacatctc		948

<210> 696

<211> 936

<212> DNA

<213> Unknown (H38g545 nucleotide)

<220>

<223> Synthetic construct

<400> 696

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tctgaagaga	tccagatggc	tctgtttatg	ctattttctc	tgatatacct	aattactatg	120
ctgggggaatg	tgggggatgat	attgataatc	cgcctggacc	tccagcttca	cactccccatg	180
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atgttctttt	ttgccttctt	gggtactgct	gaatgttacc	ttctctctct	aatggcccat	360
gategctatg	cagcgatctg	cagtcctcta	cactacacag	ttattatgtc	caaaaggctc	420
tgccctcgtc	tcatcactgg	gccttatgtg	attggcttta	tagactcctt	tgtcaacgtg	480
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attattgttg	gttccacctt	gatgggtgtc	cttttcacaa	tatctgcate	ctatgtgttc	660
attctcttta	ccatcctgaa	aattaattcc	acttcaggaa	agcagaaagc	tttctctact	720

tgcgtctctc atctcttggg agtcaccatc ttttatagca ctctgatttt tacttattta	780
aaaccaagaa agtcttattc cttgggaaga gatcaagtgg cttctgtttt ttatactatt	840
gtgattcccc tgctgaatcc actcatttat agtcttagaa acaaagaggt gaaaaatgct	900
gtcatcgag tcatgcagag aagacaggac tccagg	936

<210> 697

<211> 634

<212> DNA

<213> Unknown (H38g546 nucleotide)

<220>

<223> Synthetic construct

<400> 697

acaatgttct ataaaaattag tgctttgttc taatgttttg tatcacttta ttttagtaaa	60
aattgagtaa gcaaaaaata tactgggttc tgactatctt tggcttttta gaggcattca	120
ttgccatgaa taaattataa aagttatata gttctctaata atgtttatat tttataatat	180
gaatatttag ttctctaata tgtttatatt ttataatatg aatatttctg tacattattt	240
cctaaaatgt atttttttct tttgtatctg ttgtcttttag ctattaattt ttgatagttt	300
ttctacccat cctcctcttc cctacttta agaggcagat atctgtgcaa attcctagcc	360
atgctacact aatactacag ctctctgatg acacttttac attatcctca acttttgcct	420
ctcttattga ccctctgtat catcgatgct ctatggaaga ctgttcctta tgtacttaat	480
gctcagaaaa ttctcttgac acagacagga tggcctctgt cttctacaca gtagtcattc	540
ccatgttaaa cccattgatc tggagcccca ggaacaagga tgtgacattg ccctgaggaa	600
agtcatggtc aatagaaaac aggcattatt ttgc	634

<210> 698

<211> 682

<212> DNA

<213> Unknown (H38g547 nucleotide)

<220>

<223> Synthetic construct

<400> 698

tgcattgtct ctttttattt taatttttac catttttttt cccacatgaa aggtcttgca	60
gtcacttaga aatgctgaga taaattgact ggtataaagt aaggatatctg attaatgaaa	120
tttactctaa aactaattgg ctttttcatt gactataaga ctatgcacaa ccacttcgta	180
ctcaaacatg caattctctt tccaatgttg tatgacccag taccagctc ttcaaagcac	240
attttttttt cttggtagat ctcaggtctt cttctgtttg ctgatggcct agacaactat	300
agggccatct gaaagtcctt gcagtatttg gttgtcatga agcaatggct gtgtgtgttg	360
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catgggctcc catcttatga cccaatgtc attggctcgtt ttgtctgtga catggacccc	480
ttaatgaagc ttgtctgtga ctatacactc aacagatttg tctattttgc aggtcatgac	540
ttaaatacta ggttttatat atttcgttta tattcagact ggactgtttc cttttgggtg	600
tttgactttg gtatcctttt gtaatttttt ccctagagga catgattcta taaatcttgt	660
tatacatagt tattatccct gt	682

<210> 699

<211> 897

<212> DNA

<213> Unknown (H38g548 nucleotide)

<220>

<223> Synthetic construct

<400> 699

atggagccaa ggaaaaatgt gactgacttt gtcctcttgg gcttcacaca gaatccaaag	60
gagcagaaa gactttttgt tatgttcttg ctcttctaca ttttgaccat ggtgggcaac	120
ctgctcattg tagtgaccgt aactgtcagt gacacctgg gctcaccaat gtccttcttt	180
cttgctggct taacatttat agatatcatt tattcttcat ccatttcccc cagattgatt	240

tcagacttgt	tctttgggaa	taattccata	tccttccaat	ctttcatggc	ccagctcttt	300
atcgagcacc	tttttgggtg	gtcagaggtc	tttctcctgt	tggtgatggc	ctatgaccgc	360
tatgtggcca	tctgtaagcc	cttgccattat	ttgggtatca	tgagacaatg	gggtgtgtgt	420
ttgctgctgg	tagtgctcctg	ggttggagga	tttctgcaat	cagtatttca	acttagcatt	480
atztatgggc	tcccattctg	tgcccccaat	gtcattgatc	attttttctg	tgacatgtat	540
cccttattga	aactggcctg	cactgacacc	catgttattg	gcctcttagt	ggtaggccaat	600
ggaggactgt	cttgccactat	tgcgtttctg	ctcttactca	tctcttatgg	tgtcatcctg	660
cactctctaa	agaaacttag	tcagaaaggg	aggcaaaaag	cccactcaac	ctgcagttcc	720
cacatcactg	tgggtgtctt	cttctttgtt	ccttgtattt	ttatgtgtgc	tagacctgct	780
aggaccttct	ccattgacaa	atcagtgagt	gtgttttata	cagtcataac	cccaatgctg	840
aaccccttaa	tctacactct	gagaaattct	gagatgacaa	gtgctatgaa	gaagctt	897

<210> 700

<211> 945

<212> DNA

<213> Unknown (H38g549 nucleotide)

<220>

<223> Synthetic construct

<400> 700

atgagtcctg	atgggaacca	cagtagtgat	ccaacagagt	tcgtcctggc	agggctccca	60
aatctcaaca	gcgcaagagt	ggaattattt	tctgtgtttc	ttcttgtcta	tctcctgaat	120
ctgacaggca	atgtgttgat	tgtgggggtg	gtaagggctg	atactcgact	acagaccctt	180
atgtacttct	ttctgggtaa	cctgtcctgc	ctagagatac	tgctcacttc	tgtcatcatt	240
ccaaagatgc	tgagcaattt	cctctcaagg	caacacacta	tttcttttgc	tgcatgtatc	300
acccaattct	atttctactt	ctttctcggg	gcctccgagt	tcttactgtt	ggctgtcatg	360
tctgcggtac	gctacctggc	catctgtcat	cctctgcgct	accccttgct	catgagtggg	420
gctgtgtgct	ttcgtgtggc	cttggcctgc	tgggtggggg	gactcgtccc	tgtgcttggg	480
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tacggcctca	ttgtgctggc	agtcctgagc	atccccctctg	cttcaggccg	tcagaaggcc	720
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acgacatttg	tgacaccact	gttgaatcca	ttcatctatg	ccttacgtaa	tgagcaagtc	900
aaggaagctt	tgaaggacat	gtttaggaag	gtagtggcag	gcgtt		945

<210> 701

<211> 772

<212> DNA

<213> Unknown (H38g550 nucleotide)

<220>

<223> Synthetic construct

<400> 701

gtactctgtg	tcataattttg	taaatgaaat	catcatataa	gtttattgag	tttttttgag	60
tacctaatga	cttaataaaa	aaaatatggg	agcatatgta	gtaccatgct	tgtatcaata	120
cggataaagt	atctggaagt	ctttgctgag	aatctttttg	tgctgctgag	attattccac	180
tgatgtggat	gggtccatggc	tgttatgtga	ccgtctgtac	tacatgacca	tcgtgaatca	240
atataggtgt	agccatctca	ctggaatggc	atgtactgaa	agctttatcc	aggcacagtt	300
tagatcctct	ccccagctcg	acttcctttc	tatgacccca	atgtcatagc	tcattcatgt	360
gtgacttaaa	cacttttttg	aaactcctct	gcatgggtac	tactaataca	attggtttct	420
ttgttgctgc	caatgggtggg	ttcaactacc	tgtaaacaat	cattttcttg	atgggtttct	480
aagtggccat	cctatgtact	ttgaaaactc	acagcttgga	ggaaagatgc	taaagtcttc	540
tacctgcac	tctcacacca	ccatgggtcat	cttatctttg	agttctgtat	atctgtgtat	600
ctgtgcccag	tgacccttcc	ccaatcaata	aagcaatggc	tgtgtttcat	accgtgataa	660
atcctatgtt	aaaaccttta	gtctaaccct	cagaaatgca	gaggtgaaaa	gtgctttgag	720
aaaggtctgg	gtcaaaaagt	gacctgaaga	gagaaataat	ctaaacataa	ga	772

<210> 702
 <211> 954
 <212> DNA
 <213> Unknown (H38g551 nucleotide)

<220>
 <223> Synthetic construct

<400> 702
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 ccaagacttg agttactctt ttttgtgctc atcttcataa tgtatgtggt catccttctg 120
 gggaatggta ctctcatttt aatcagcatc ttggaccctc accttcacac ccctatgtac 180
 ttctttcttg ggaacctctc cttcttggac atctgctaca ccaccacctc tattccctcc 240
 acgctagtga gcttcctttc agaaagaaa accatttccc ttcttggtcg tgcagtgcag 300
 atgttctctc gcttggccat ggggacaaca gagtgtgtgc ttctgggctg gatggccttt 360
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 gtgaccacaa cattgttctt attgacacct ttgttattaa ttattgtctc ttacacgtta 660
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 tgctcagctc gtctgactgt ggtgataaca ttctgtggga ccatcttctc catgtacatg 780
 aagcccaagt ctcaagagaa acttaattca gatgacttgg atgccactga caaacttata 840
 ttcatattct acagggtgat gactcccatg atgaatcctt taatctacag tcttagaaac 900
 aaggatgtga aggaggcagt aaaacaccta ctgagaagaa aaaattttta caag 954

<210> 703
 <211> 999
 <212> DNA
 <213> Unknown (H38g552 nucleotide)

<220>
 <223> Synthetic construct

<400> 703
 atggaatgga ccaattggac agagatagag ttcatctctg aaggactttc agggtagacca 60
 agagctgaaa aattcctttt cgtgatgtgc ttagtgatgt acctggtgat tctcctagggt 120
 aatggcacct tgatcattct gacactcctg gatgctctgc tccacacacc catgtacttc 180
 ttcttgggga atctttcctt cctagacatt tggtagacat cctcctccat cccctcaatg 240
 ctgatacact tcctatcaga gaagaaaacc atctccttca ctagatgtgt gattcaaagt 300
 tctgtctctt acactatggg atccaccgag tgtgtgcttc tagcagtgat ggcataatgac 360
 cgttatgtag ccatctgcaa cctctgaga tatcccatca tcatgggcaa ggcactttgt 420
 attcagatgg tggctgtctc ttggggacta ggctttctca actcattgac agaaactggt 480
 cttgcaatac ggttaccctt ctgtggaaaa aaatgtcatt aatcattttg tttgtgaaat 540
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 gggcaatgta atatttttgt tttctccatt actgctgatt tgtatctcct acatctttat 660
 cctttctact gtactaagaa tcaattcagc tgaaggaagg aaaaaggcct tttccacctg 720
 ctgagcccac atgacagtgg tgattgtgtt ttatgggaca atcctcttca tgtacatgaa 780
 ggcaaatgcc aaagactctg cttttgacaa actgattgcc ctgttctatg gcatagtcac 840
 ccccatgctc aatcctatca tctatagcct gaggaatata gaggtgcatg gagctatgag 900
 gaaattaatg agtagaccct ggttctggag gaaatgatga cacactgaca cctttgagtt 960
 tatgcacaaa atacgctcac aagtttgaga caacacttt 999

<210> 704
 <211> 966
 <212> DNA
 <213> Unknown (H38g553 nucleotide)

<220>
 <223> Synthetic construct

<400> 704

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gatccagaac	tgcagccggt	cctcgctttg	ctctccctgt	ccctgtccat	gtgtctggtc	120
atgggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgtctctcc	cctccacacc	180
cccgtgtact	tcttcctctc	taaactgtgc	tgggctgaca	tcggtttcac	cttggccacg	240
gttcccaaga	tgattgtgga	catgcagtcg	catagcagag	tcattctctca	tgcgggctgt	300
ctgacgcaga	tgtctttctt	catccttttt	gcatgtatag	aaggcatgct	cctgacagtg	360
atggcctatg	actgctttgt	agccatctgt	cgccctctgc	actaccagtg	catcgtgaat	420
cctcacctct	gtgtctcctt	ccttttgggtg	tcctttttcc	ttagcatgtt	ggattcccag	480
ctgcacagtt	gaattgtggt	acaattcaca	atcatcaaga	atgtggaaat	ctctaatttt	540
gtctgtgacc	cctctcaact	tctcaaactt	gcctgttctg	acagcgcat	caatagcata	600
ttcatatatt	tcaatagtag	tatgtttggt	tttcttccca	tttcagggat	cctatgggtct	660
tactgtaaaa	tcgtcccttc	cattctaagg	atttcatcat	cagatgggaa	gtataaagcc	720
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ttctctgtgg	tcacccccat	gctgaacctt	ttcatctaca	gcctgagaaa	cagggaacata	900
caaagtgcc	tgccggaggct	gctcagcaga	acagtcgaat	cttatgatct	gttccatcct	960
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<210> 705

<211> 937

<212> DNA

<213> Unknown (H38g554 nucleotide)

<220>

<223> Synthetic construct

<400> 705

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aaggccctgc	agggccccct	gttctgggtg	gtgcttcttg	tctacctggt	caccttgctg	120
ggtaactccc	tgatcatect	cctcacacag	gtcagccctg	ccctgcactc	ccccatgtac	180
ttcttctctg	gccaactctc	agtgggtggag	ctcttctaca	ccactgacat	cgtgcccagg	240
accctggcca	atctgggctc	cccgcattcc	caggccatct	ctttccaggg	ctgtgcagcc	300
cagatgtacg	tcttcattgt	cctgggcate	tcggagtgtc	gcctgctcac	ggccatggcc	360
tatgaccgat	atgttgccat	ctgccagccc	ctacgctatt	ccaccctctt	gagccccacg	420
gcctgcatgg	ccatgggtgg	tacctcctgg	ctcacaggca	tcattcacggc	caccacccat	480
gcctccctca	tcttctctct	accttttctc	agccaccgca	tcattcccga	ctttctctgt	540
gacatcctgc	cagtactgag	gctggcaagt	gctgggaagc	acaggagcga	gatctccgtg	600
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cgcattcctg	gtgccatctt	agcaatggcc	tccaccacga	gccgccgcaa	ggctctctcc	720
acctgtcctt	cccattctgt	cggtggtctc	tctcttcttt	ggaacagcca	gcatcaccta	780
catccggccg	caggcaggct	cctctgttac	cacagaccgc	gtcctcagtc	tcttctacac	840
agtcattaca	cccatgctca	accccatcat	ctacaccctt	cggaacaagg	acgtgaggag	900
ggccctgcga	cacttggtga	agaggcagcg	ccctca			937

<210> 706

<211> 930

<212> DNA

<213> Unknown (H38g555 nucleotide)

<220>

<223> Synthetic construct

<400> 706

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cctgaattac	aagtcagtct	tttcttgatg	tttctcttca	tttatctatt	cactgttttg	120
ggaaacctgg	gactgatcac	gttaatcaga	atggattctc	agcttcacac	ccctatgtac	180
tttttcttga	gcaatttagc	atttattgac	atatcttact	cctctactgt	aacacctaa	240
gcattgggtga	atttccaate	caatcgagga	tccatctcct	ttgttggctg	ctttgttcaa	300
atgtactttt	ttgttggatt	ggtgtgttgt	gagtgtttcc	ttctggggtc	aatggcctac	360
aatcgctaca	tagcaatctg	caatccctta	ctgtattcag	tagtcatgtc	ccaaaaagtg	420

tccaactggc	tgggagtaat	gccatatgtg	ataggcttca	caagctcgct	gatatctgtc	480
tgggtgataa	gcagtttggc	gttctgtgat	tccagcatca	atcatttttt	ttgtgacacc	540
acagctcttt	tagcactctc	ctgtgtagat	acattcggca	cagaaatggt	gagctttgtc	600
ttagctggat	tcactcttct	tagctctctc	cttatcatca	cagtcactta	tatcatcctc	660
atctcagcca	tcctgaggat	ccagtcagca	gcaggcaggc	agaaggcctt	ctccacctgc	720
gcacccacc	tcattggctgt	aactatcttt	tatgggtctc	tgattttcac	ctatttgcaa	780
cctgataaca	catcatcgct	gacccaggcg	caggtggcat	ctgtattcta	tacgattgtc	840
attcccatgc	tgaatccact	catctacagt	ctgaggaaca	aagatgtgaa	aaatgctctt	900
ctgagagtca	tacatagaaa	actttttcca				930

<210> 707

<211> 471

<212> DNA

<213> Unknown (H38g556 nucleotide)

<220>

<223> Synthetic construct

<400> 707

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ttaggggtgt	atataatagg	cctggtttgt	gcacagttc	atacaggctg	tatgtttagg	120
gttcaattct	gcaaatttga	tttgattaac	cattatttct	gtgatcttct	tcccctccta	180
aagctctctt	gctctagtag	ctatgtcaac	aaactactta	ttctatgtgt	tggtgcattt	240
aacatccttg	tccccagctt	gaccatcctt	tgctcttaca	tctttattat	tgccagcatc	300
ctccacattc	gctccactga	gggcagggtc	aaagccttca	gcactttag	ctcccacatg	360
ttggcggttg	taatcttttt	tggatctgca	gcattcatgt	acttgcagcc	atcttcaatc	420
agctccatgg	accaggggaa	agtatcctct	gtgttttata	ctattattgt	g	471

<210> 708

<211> 529

<212> DNA

<213> Unknown (H38g557 nucleotide)

<220>

<223> Synthetic construct

<400> 708

ctggccccgt	cctccagtct	ggccttgggg	acatggcggt	ggcaatggca	cagcatgact	60
gagcttggtt	tggttggtgt	ctcaggtttt	ggttccgtcc	ggggccttct	gttttgggca	120
gtgctctgca	aacatctggt	gaccctgctg	gacaactccc	tgatcgctcg	cctcgccctg	180
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cccaccggta	ggcggccttc	cgctgctggg	tttcttcgcc	ctccctggca	tcgccgaatg	360
cgcttgcgca	gggccatggc	ctccgcgct	gtgacgccat	ctgccggccg	ctgcattcta	420
ctacctgagg	agccctagtc	ttccgagccc	gcttcgcctt	caccttgccc	ttctgcggcg	480
cagcaccacc	cgctacttcc	ggctggattc	tcggcctgtg	ctgagacct		529

<210> 709

<211> 942

<212> DNA

<213> Unknown (H38g558 nucleotide)

<220>

<223> Synthetic construct

<400> 709

atgaccagaa	aaaattatac	ctcactgact	gagttcgctc	tattgggatt	agcagacacg	60
ctggagctac	agattatcct	ctttttgttt	tttcttggtg	tttatacact	tacagtactg	120
ggaaatctcg	ggatgatcct	cttaatcagg	atcgattccc	agcttcacac	acccatgtat	180
ttcttcctgg	ctaacctgtc	ctttgtggac	gtttgtaact	caactaccat	caccccaaag	240
atgtctggcag	atttattatc	agagaagaaa	accatctctt	ttgctggctg	cttcctacag	300

atgtacttct	ttatctccct	ggcgacaacc	gaatgcatcc	tctttggggt	aatggcctat	360
gacaggtatg	cggccatag	tcgcccgtg	ctttactcct	tgatcatgtc	caggaccgtc	420
tacctaaaaa	tggcagccgg	ggcttttgct	gcagggttgc	tgaacttcat	ggtcaacaca	480
agccatgtca	gcagcttgtc	attctgtgac	tccaatgtca	tccatcactt	cttctgtgac	540
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gttctcttct	ccattttttc	tatgcattcg	ggggagggga	ggcacagagc	tttctccacg	720
tgtgcctctc	acctgacagc	cataattctg	ttctatgcc	cctgcctcta	tacttacctg	780
agacctagtt	ccagctactc	cctgaatcag	gacaaagtgg	cttctgtgtt	ctacacagtg	840
gtgattccca	tgttgaatcc	tctgatctac	agcctcagga	gtaaggaagt	aaagaaggct	900
ttagcgaatg	taattagcag	gaaaaggacc	tcttcctttc	tg		942

<210> 710

<211> 941

<212> DNA

<213> Unknown (H38g559 nucleotide)

<220>

<223> Synthetic construct

<400> 710

atgaccagaa	aaaattatac	ctcactgact	gagttcatcc	tattgggatt	agcagacacg	60
ctggagctac	agattatcct	ctttctgtta	tttcttgtga	tttacacact	taccgtactg	120
ggaaatatcg	ggatgaccc	cttaatcagg	atcgattccc	ggcttcacac	acccatgtat	180
ttcttctctg	ttaacctgtc	ctttgtggac	atttgttact	caaccacccat	caccccaaag	240
atgctggcag	atattattatc	agagaagaaa	accatctctt	ttgctggctg	cttcctacag	300
atgtacttct	ttatcgccct	ggcgacaacc	gaatgcatcc	tctttggggt	aatggcctat	360
gaccggtatg	tgaccatag	tcgcccgtg	ctttactcct	tgatcatgtc	caggacagtc	420
tgcctaaaaa	tggcagccgg	ggcttttgct	gcagggttgc	tgaactccat	ggtcaacact	480
agctatgtca	gcagcttgtc	attctgtggc	tccaatgtca	tccatcactt	cttctgcaac	540
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agacctagtt	ccagctactc	cctgatcagg	acaaagtgg	ttctgtgttc	tacacagtg	840
tgatcccat	attgaatcct	ctgatctaca	gcctcaggaa	taaggaagta	aagaaggctt	900
tagcgaatgt	aattagcagg	aaaaggatcc	cttcatttct	g		941

<210> 711

<211> 939

<212> DNA

<213> Unknown (H38g560 nucleotide)

<220>

<223> Synthetic construct

<400> 711

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ccagggtctg	agtacctgtc	cttctcctc	ttctgtctca	cctacctctt	tgtcctgggtg	120
gagaacctgg	ccatcactct	catcgtctgg	agcagcacct	cctccacag	gccccatgtac	180
tactttctga	gtccatgtc	tttcttgagg	atctggtacg	tgtctgacat	cacccccaag	240
atgctggagg	gttctctcct	ccagcagaaa	cgcattctct	tcgtcgggtg	catgacgcag	300
ctctacttct	tcagctccct	ggtgtgcacc	gagtgtgtgc	ttctgcctcc	atggcctacg	360
accgctacgt	ggccatctgc	cacccgctgc	gctaccacgt	ccttgtgacc	gccgggctgt	420
gctccagctg	gtgggcttct	cctttgtgag	tgcttctcca	tctccatgat	caaggctctgt	480
tttatctcca	gcgtcacgtt	ctgtggctcc	aacgtcttga	accacttct	tctgtgacat	540
ttcccccatc	ctcaagctgg	cctgcacgga	cttctccact	gcagagctgg	tgatttcatc	600
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accctggctg	tcctgcgcac	ccccctggcc	accggctgtg	ggagagcctt	ctctacctgc	720
gcctctcacc	tcacgtggt	caccgtcttc	tatacagcct	tgcttttcat	gtatgtccgg	780
ccccaaagcca	ttgattccca	gagctccaac	aagctcatct	ctgccgtgta	cactgttgct	840

acgccataa ttaacccttt gatttactgc ctgaggaaca aggaatttaa ggacgccttg 900
 aaaaaggcct tgggcttggg tcaaacttca cactaagac 939

<210> 712

<211> 642

<212> DNA

<213> Unknown (H38g561 nucleotide)

<220>

<223> Synthetic construct

<400> 712

ctggctgacc	tctgtttctc	taccaacata	gttcctcagg	cactagtcca	cctgctttcc	60
agaaagaagg	tcattgtatt	cacactgtgc	gcagctcgac	ttctctttct	cctcattggg	120
gggtgtaccc	agtgcgccct	tcttggagtg	atgtcctatg	atcgctatgt	tgcaatctgc	180
aatcctctgc	gttaccctaa	catcatgacc	tggaaagtgt	gtgtccagct	ggcaacagca	240
ccattggacca	gtggtattct	ggtgtctgtg	gtagacacca	ccttcacact	gaggctaccc	300
taccgaggca	gtaacagcat	tgctcatttc	tgggtgagg	cccctgcact	attgatctta	360
gcateccacag	acacccatgc	atcagagatg	gccatttttc	ttacgggggt	tgtgattctc	420
ctcatacctg	tttttctgat	tctggtatcc	tatggccgta	tcataagtaac	tgtggtcaag	480
atgaagtcaa	ctgtggggag	tctcaaggca	ttttctacct	gtggctccca	cctcatgggtg	540
gtcatacttt	tttatggatc	agcaattatc	acttacatga	cacccaagtc	ttccaaacag	600
caggaaaaat	cggtgtctgt	tttctatcca	atagtgtactc	cc		642

<210> 713

<211> 948

<212> DNA

<213> Unknown (H38g562 nucleotide)

<220>

<223> Synthetic construct

<400> 713

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ctacctctca	gagtcacact	gttcttggta	ttccttcttg	tatatacatt	aactatggtc	120
ggaaatatac	tcttaataat	tctagttaat	attaattcaa	gccttcaa	tcccatgtat	180
tattttctta	gcaacttata	tttcttagac	atcagctggt	ctacagcaat	cactcctaaa	240
atgctggcaa	acttcttggc	atccaggaaa	agcatctctc	cttatgggtg	tgcactacaa	300
atgtttttct	tcgcttcttt	tgtgtatgct	gagtgcctta	tcctggcagc	aatggcttat	360
gaccgctatg	cagccatctg	caacccactg	ctctatacta	cactgatgtc	taggagagtc	420
tgtgtctgct	tcatttgtgt	ggcatatttc	agtggaaagta	caacatcact	gggccatgtg	480
tgccctcacat	tcaggctgtc	attttgtggc	tccaatatcg	tcaatcattt	tttctgtgat	540
atcccacctc	ttctggcttt	atcatgtaca	gacactcaga	tcaaccagct	tctgctcttt	600
gctttgtgca	gcttcatcca	gaccagcact	tttgtggtaa	tatttatattc	ttacttctgc	660
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tgtgcttccc	acctcatagc	agtcacctta	ttctatggag	cgctcctgtt	tatgtactta	780
cagcccacca	ctagctattc	cctagacact	gataagggtg	tggcagtggt	ttatactgtt	840
gtatttccca	tgtttaatcc	aataatttat	agtttcagaa	acaaggatgt	gaaaaatgct	900
ctcaaaaagc	tattagaaag	aattggatat	tcaaatgaat	ggtattta		948

<210> 714

<211> 939

<212> DNA

<213> Unknown (H38g563 nucleotide)

<220>

<223> Synthetic construct

<400> 714

atgtcaaccc	acagaaatgg	aaatctctca	gtggttcctt	tgtgggagag	catgctgaag	60
ggacttgagg	gtggcctgga	gaaccaggcc	ctgctctttg	ctgtgttccc	aggtctatac	120

atggtgacca	tcccgggaaa	cctcaccatg	accatgggtca	tcatectgga	cacgcacctg	180
cacttcccag	tgaacttctt	cctcaggagc	ctcccccttc	ctggaccttg	gccatgcctc	240
catcacccca	atgccctggg	taactttctt	tctctgtcca	aggtcgtcac	ctttgcaggc	300
tgtgctgccc	ggttcttttt	ctccttgctg	tctaccactg	agaatttcct	gctggccgtg	360
atggcctatg	actgcttcgt	ggccatctgt	agtctgggtg	gggtgccagt	gaccacgtgc	420
ctctcgatct	gcatactcct	gggaccaggc	acctaactgca	gggtctgcct	cagctccatc	480
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gtgacatgcc	ccagctgctc	cggttggtct	gtgcatgcct	ggccctcaat	gagctgacca	600
agttcagcct	ttgtgggctc	atgatgggaa	cgccactctt	gtggctcctg	tctcctttgg	660
ctgtgtcaca	gtgaccatcc	tgaggacacc	ctccgcagcc	agtgacataa	ggtcttcacc	720
tgtagctccc	acgtgatgac	cgtgtccctg	tttgatggga	ctgtgtttgt	cacatatgcc	780
cagccaggga	ctatggagtc	catggagcag	ggcaagggtg	tgtctgtctt	ctacagcctg	840
gtcatcccga	tgcttggtcc	cttcactctac	agcctacgaa	acaaggacat	gaaggaggcc	900
ctgcggaggc	tgggccagag	acaagcactc	atgggaagg			939

<210> 715

<211> 756

<212> DNA

<213> Unknown (H38g564 nucleotide)

<220>

<223> Synthetic construct

<400> 715

atgtacttct	tccttggcaa	cctctccttt	tgtgatattct	gctactctac	tgtctttgct	60
cctaagatgc	tagtcaattt	cctatcaaaa	cataagtcca	gtacattttc	tggtctgtgt	120
ctacagagtt	tcctttttgc	agtatatgta	accacaaagg	acatttctct	gtccatgatg	180
gcttatgacc	attacgtggc	catagctaat	cccttggtgt	atacagtcac	tatggcccaa	240
aaagtttgta	ttcagatggg	ccttgcttct	tacttaggtg	ggctcattaa	ttccctgaca	300
cacacaatag	gtttgctcaa	attagacttc	tgtgggtccta	atattgtgaa	tcattatttc	360
tgtgatgttc	ctcctcttct	gaggtcttct	tgctctgatg	ctcatatcaa	tgaaatgctg	420
cccttgggtc	tctctgggct	cattgcaatg	ttcactttca	ttgtcattat	gggtctttat	480
atctgcatca	tcattgccat	ccagagaatc	catgcagctg	aggggaaggta	caaagccttc	540
tccacttggt	tctccacact	aaccacggtg	accttattct	atgggtctgt	ttcttttagt	600
tatatccagc	caagttctca	gtattccttg	gaacaggaga	aggtcttggc	tgtgttttat	660
acactgggtg	tcccatgct	aaaccactt	atttatagcc	tgagaaataa	ggatgtaaaa	720
gatgcagcca	aaaggttgat	atggtggggg	gaaaaa			756

<210> 716

<211> 954

<212> DNA

<213> Unknown (H38g565 nucleotide)

<220>

<223> Synthetic construct

<400> 716

atgagtgggg	agaatgtcac	cagggtcggc	accttcatcc	tggtggggctt	ccccacggcc	60
ccagggtgct	agtagctgct	cttctctctc	ttcctgctca	cctacctctt	tgctctgggtg	120
gagaacctgg	ccatcatcct	caccgtctgg	agcagcacct	ccctccacag	gcccatgtac	180
tactttctga	gctccatgtc	tttcttagag	atctggtaag	tgtctgacat	cacccccaa	240
atgctggagg	gcttctctct	ccagcagaaa	cgcatctctt	tcgtcgggtg	catgacgcag	300
ctctacttct	tcagctccct	ggtgtgcacc	gagtgtgtgc	ttctggcctc	catggcctac	360
gaccgctacg	tggccatctg	ccaccgctg	cgctaccacg	tccttgtgac	ccggggctgt	420
gcctccagct	ggtgggcttc	tcctttgtga	gtggcttcac	catctccatg	atcaaggctc	480
gttttatctc	cagcgtcacg	ttctgtggct	ccaacgtctt	gaaccacttc	ttctgtgaca	540
tttcccccat	cctcaagctg	gcctgcacgg	acttctccac	tgagagctg	gtggatttca	600
ttctggcctt	catcatcctg	gtgtttccac	tcctggccac	catgctgtca	tatgggcaca	660
tcaccctggc	tgtctctgct	atccctctgc	caccggctgc	tggagagcct	tcttcacttg	720
cgctctctac	ctcaccgtgg	tcaccgtctt	ctatacagcc	ttgcttttca	tgtatgtccg	780
ccccaggcca	ttgattcccc	gagctccaac	aagctcatct	ctgtttttga	cacagttatc	840

acccccatct tgaaccctt gatatactgc ctgaggaata aggaatttaa gaatgccttg 900
 aaaaacagtc ggcttgacga ctgcgccgta gaggggaggc tttctagtct tctg 954

<210> 717

<211> 960

<212> DNA

<213> Unknown (H38g566 nucleotide)

<220>

<223> Synthetic construct

<400> 717

atggctgatg	ttaattttac	attggttact	gagtttatcc	ttttggaact	gacagatcgt	60
gctgaactga	agatggctcct	cttcgtgttg	ttcctgctga	tctacacccat	ttccctggtg	120
ggaaatatag	gaatgctctt	tctaattctat	gtaactccca	aactccacac	acccatgtat	180
tatttcctca	gctgtctgtc	atttggtgat	gcctgctatt	catcagtttt	tgcacccaga	240
atgctgctga	acttctttgt	tgagcgggag	acaatcttat	tctctgcatg	tattgtgcag	300
tattttttat	tcgtgtctct	ccttaccact	gagggcttct	tgctggccac	aatggcttac	360
gaccgtttaca	tggccattgt	gaacccttta	ctttatacag	tagctatgac	taaaatagtt	420
tgtattgtgc	tcgcatttgg	gtcatgtatg	ggaggtttta	tcaactcatt	gacacataca	480
attggcttgg	tgaactgtc	tttctgtggg	ccaaatgtca	tcagtcactt	cttctgtgat	540
cttccccac	tgttgaagct	gtcatgttct	gagacatcta	tgaatgaatt	gttgcttttg	600
atcttctctg	gcattattgc	cacgctcact	tttttgactg	tggtgatctc	ctacatcttc	660
attggttctg	ctatcctgag	gatccgctaa	gcagcaggta	gacgtaaagc	cttctccacc	720
tgcacctctc	acctgattac	cgtgacctta	ttctatggat	cgataagctt	tagttacatt	780
cagccaaact	cccagtatct	cctagaacaa	gaaaagggtg	tgtctgtatt	ttataccctg	840
gtggttccta	tgttaaacc	attgatttac	agcctaagga	acaaggaagt	gaaggaagct	900
gtgaaaagg	ctatagaaat	gaaacatttt	ccttggtta	ttcatatttc	catatccaaa	960

<210> 718

<211> 938

<212> DNA

<213> Unknown (H38g567 nucleotide)

<220>

<223> Synthetic construct

<400> 718

atgttgggga	attactctag	cgccactgaa	ttttttctct	taggcttccc	tggtcccaa	60
gaagtacgcc	gtatcctttt	tgtgaacttc	ttcttcttgt	acgcagtgc	agtgatggga	120
aacacggtca	tcatcgtcac	tgtctgtgtt	gataaacatc	tgcagtcctc	catgtatttt	180
ttcctggggc	acctctgtgt	cctggagatc	ctgatcacat	ccaccgctgc	cccttttatg	240
ctgggggggt	gctgcttcca	agcaccacga	tcagtctttt	gacagcctgt	gctgcacagc	300
tatatacctt	tctttgggta	cctcggagtt	ggcattaatg	ggagtgtatg	ctgtggacca	360
ttatgtggct	gtgtgttaacc	ctttgaggta	caacatcatt	atgaacagca	gcacatgtgt	420
ctggatggtc	attgtatcat	gggtgttttg	gttctttttt	caaactctggc	cagtttatgc	480
cacttttcag	cttactttct	gcaaataaaa	tgtgttagat	cattttttact	gtgactgagg	540
acaattgtc	aagggtatcct	gtgaggacac	tcttttcaca	gagtttatte	tttttcta	600
ggctgttttc	attatcattg	gttcttttga	tccttacgat	tgtctcttac	acctacatca	660
tctccaccat	cctcaagatc	ccgttagcct	ctggctggag	gaaatccttt	tccacttgtg	720
cctcccaact	cacctgtgtt	gtgatcggct	acagcagctg	cttggtttctc	tacacgaaac	780
ccaagcaaac	acaggcagcc	aagtataacc	ggatagcgtc	actgctgggt	ttagtgggtga	840
ccccttttct	gaacccttct	atcttcaccc	tgaggaatga	caaattcata	caggcctttg	900
gagatggcat	gaaacactgc	tatcaactcc	tcagaatt			938

<210> 719

<211> 942

<212> DNA

<213> Unknown (H38g568 nucleotide)

<220>

<223> Synthetic construct

<400> 719

atataaatgg	ctgacagaaa	tgctactgtg	ataactgaat	tcatectcct	ggggttgact	60
gataaccctg	aaatgaatgt	tgctctttct	gtgctcttct	tattaatcta	tctcattact	120
gtcttgggca	acttttggat	tatcataata	attctggcta	gtgcccact	ccattcaccc	180
atgtactttt	tccttagcca	gttggcttct	ttagatttct	gctattcttc	agtcttgatt	240
cctaaaatgt	tgggtgaatta	catagcagga	cagaaagtca	tctcttatca	cggttgcctc	300
cttcagtatt	cctttgtcag	cttggtcctg	actactgaat	gcttcctcct	ggctgccatg	360
gcatgtgatc	ggtatctcgc	tgtttgccac	ccacttcact	acaaaggtct	catgactcct	420
actttctgaa	tctatttggg	gactgtttct	tacctgctgg	gctctgtaaa	ctccctcacc	480
cacctgagta	gcttactcag	tttgtcttct	tgtgggtcca	atgttatcaa	ccgttatttc	540
tgtgacattc	catgtctctt	ccaactctcc	tggtccaaca	cccaacacag	taagatttta	600
tttactgtcc	tttctggagc	aacatcagtg	actacctttt	tgatagtggg	tagttcctat	660
ctggtaatcc	tactcattgt	cctgaagata	cattccacca	ggggcagaaa	taaagccata	720
tccacatgtg	cctccacact	aatggtagtg	actctcttct	acagaacagt	gatatttact	780
tatctgggag	ccaaccctgg	atactcacag	gatagaccga	aaattctgcc	tgtggagtg	840
acacttttgt	tgtcaatact	aaatcttcta	atatatagcg	tgagaaacag	agaagtcaaa	900
gaagccataa	aaataattat	taagagaaaa	atacttcttc	ag		942

<210> 720

<211> 942

<212> DNA

<213> Unknown (H38g569 nucleotide)

<220>

<223> Synthetic construct

<400> 720

atgttgatga	attactctag	tgccactgaa	ttttatctcc	ttggcttccc	tggctctgaa	60
gaactacatc	atatectttt	tgtctatattc	ttctttttct	acttgggtgac	attaatggga	120
aacacagtc	tcacatgat	tgtctgtgtg	gataaacgtc	tgcagtcccc	catgtatttc	180
ttctctggcc	acctctctgc	cctggagatc	ctggtcacaa	ccataatcgt	ccccgtgatg	240
ctttggggat	tgtgctccc	tgggatgcag	acaatatatt	tgtctgcctg	tgttgtccag	300
ctcttcttgt	accttgcctg	ggggacaaca	gagttcgc	tacttggagc	aatggctgtg	360
gaccgttatg	tggctgtctg	taaccctctg	aggtacaaca	tcattatgaa	cagacacacc	420
tgcaactttg	tgggtcttct	gtcatgggtg	tttgggttct	tttttcaa	ctggccgggtc	480
tatgtcatgt	ttcagcttac	ttactgcaaa	tcaaatgtgg	tgaacaattt	tttttgtgac	540
cgagggcaat	tgtctaaact	atcctgcaat	aatactcttt	tcacggagtt	tatcctcttc	600
ttaatggctg	tttttgttct	ctttgggtct	ttgatcccta	caattgtctc	caacgcctac	660
atcatctcca	ccattctcaa	gatcccgta	ctctctggcc	ggaggaaatc	cttctccact	720
tgtgcctccc	acttcacctg	tgttgtgatt	ggctacggca	gctgcttgtt	tctctacgtg	780
aaacccaagc	aaacgcaggc	agctgattac	aattgggtag	tttccctgat	ggtttcagta	840
gtaactcctt	tcctcaatcc	tttcatcttc	accctccgga	atgataaagt	catagaggcc	900
cttcgggatg	gggtgaaacg	ctgctgtcaa	ctattcagga	at		942

<210> 721

<211> 936

<212> DNA

<213> Unknown (H38g570 nucleotide)

<220>

<223> Synthetic construct

<400> 721

atgatgggta	gaaggaatga	cacaaatgtg	gctgacttca	tccttacggg	actgtcagac	60
tctgaagagg	tccagatggc	tctgtttatg	ctatttctcc	tcataatact	aattactatg	120
ctgggggaatg	tggggatgct	attgataatc	cgcttgacc	tccagcttca	cactcccatg	180
tattttttcc	ttactcacct	gtcattttatt	gacctcagtt	actcaactgt	cgtcacacct	240
aaaaccttag	cgaacttact	gacttccaac	tatatttctt	tcacgggctg	ctttgcccag	300
atgttctgtt	ttgtcttctt	gggtactgct	gaatgttatt	ttctctcctc	aatggcctat	360

gategctatg	cagcgatctg	cagtcctcta	cactacacag	ttattatgcc	caaaaggctc	420
tgccctgctc	tcactactgg	gccttatgtg	attggcttta	tggaactcctt	tgtcaatgtg	480
gtttccatga	gcagattgca	ttctctgtgac	tcaaacataa	ttcatcactt	tttctgtgac	540
acttccccaa	ttttagctct	gtcctgcaact	gacacagaca	acactgaaat	gctgatattc	600
attatcgctg	gttccaccct	gatgggtgtc	cttatcacia	tatctgcac	ctatgtgtcc	660
attctctcta	ccatcctgaa	aattaattcc	acttcaggaa	agcagaaaagc	tttctctact	720
tgcgctctctc	atctcttggg	agtcaccatc	ttctatggaa	ctatgatttt	tacttactta	780
aagccaagaa	agtcttattc	cttgggaaga	gatcaagtgg	ctcctgtgtt	ttatactatt	840
gtgattccca	tgctgaatcc	actcatttat	agtcttagaa	acagagaagt	gaaaaatgct	900
ctcattagag	tcatgcagag	aagacaggac	tccagg			936

<210> 722

<211> 730

<212> DNA

<213> Unknown (H38g571 nucleotide)

<220>

<223> Synthetic construct

<400> 722

atgtcatgat	gaattttctg	cctgccaaaa	ataatcatta	ctttatttga	gtaggagtgg	60
gatgctttta	atttagagac	acgggttttt	ctggaagagg	acttcccatg	tggaattcagc	120
ttgtggattg	tacgtcaatt	gtcttttttc	ttggaaataa	attaatttgc	tcatttataa	180
aaatgatgca	ggaagcatat	gagtactttt	tctctgagca	acttggtctt	ttaggtttct	240
gttatgcttc	agtcattaca	tccaaaatgt	ttggaagttt	cttgtaaaaa	caaaaaaat	300
taaccttcaa	tgcacatagg	ctgctctctc	accttcata	ccaccgagtg	cttgctctag	360
ctttcatggc	ctgtgatcaa	tacctgggtc	tttgtaatcc	tcctttgtat	atgggtcacca	420
tgtccccccc	gcaaggagtc	tgcattcagc	ttatgcctgc	ctcctatagc	tatagcttcc	480
tgatgacact	ttcacattat	cctcagcctt	tgtctccctt	attgcccctc	tgtatcattg	540
atgttcaatg	gaagcctgtt	ccttatgtac	ttaatgtctc	gaaaattctc	ttgacacaga	600
caggatggcc	tctgtcttct	acacagtagt	cattcccatg	ttgagccctt	tgatctggag	660
cctcaggaac	aaggatgtga	aagatgcctt	gaggaaagtc	attgtcaaca	gaaaccaggc	720
attattttgt						730

<210> 723

<211> 936

<212> DNA

<213> Unknown (H38g572 nucleotide)

<220>

<223> Synthetic construct

<400> 723

atggctcctg	aaaatttcac	cagggtcact	gagtttattc	tcacagggtg	ctctagctgt	60
ccagagctcc	agattccctc	cttcttggtc	ttcctagtgc	tctatgtgct	gaccatggca	120
gggaacctgg	gcatcatcac	cctcaccagt	gttgactctc	gacttcaaac	ccccatgtac	180
tttttcttga	gacatctagc	tatcatcaat	cttggcaact	ctactgtcat	tgcccctaaa	240
atgctgatga	acttttttagt	aaagaagaaa	actacctcat	tctatgaatg	tgccacccaa	300
ctgggagggt	tcttgttctt	tattgtatcg	gaggtaatga	tgttggtgtg	gatggcctat	360
gaccgctatg	tggtccattt	taacctctct	ctctacatgg	tggtgggtgtc	tcggcggctc	420
tgcctcctgc	tggtgtccct	cacgtacctc	tatggctttt	ctacagctat	tgtggtttca	480
ccttgtatat	tctctgtgtc	ttattgtctc	tctaataata	tcaatcattt	ttactgtgat	540
attgcacctc	tgttagcatt	atcttgtctc	gatacttaca	taccagaaac	aatagtcttt	600
atatctgcag	caacaaattt	gtttttttcc	atgattacag	ttctagtatc	ttatttcaat	660
attgttttgt	ccattctaa	gatacgttca	ccagaaggaa	ggaaaaaagc	cttttccacc	720
tgcgcttcgc	atatgatagc	agtcacgggt	ttctatggga	caatgctatt	tatgtatttg	780
cagccccaaa	ccaaccactc	actggatact	gataagatgg	cttctgtgtt	ttacacattg	840
gtgattccta	tctgaatcc	cttgatctac	agcctgagga	ataatgatgt	aaatgttgcc	900
ttaaagaaat	tcattggaaa	tccatgttac	tccttt			936

<210> 724

<211> 481
 <212> DNA
 <213> Unknown (H38g573 nucleotide)

<220>
 <223> Synthetic construct

<400> 724
 atatgtggga gtcacagtgg tgttactgaa ttttgtctct taggcttccc tggctcccag 60
 taagtatgcc atttgttacc ttcttccttt gtcagtgatt gtaataagaa attatgtaat 120
 catcatagta tgtgttgaga aatgcctgct gttcctccta tatttattct atgggtgacct 180
 ctctgtcatg gaaatcctta tcacatatac tgctgttccc ttgatgctca ggggttggtta 240
 ctttccatga ttcaaaacaat acctttaatg acatgtgctg tccaactcta tatgaacttt 300
 tttgggggta cacaaaattt gcattactgg gagtgatgac tgtgaaccat tatgtggctc 360
 tctgtaactc tttgaagtaa aacatcatta tgagcagaca cactgcatct ggctggtaat 420
 tgtattattg attgggttcc tttctgaaat ctggtcagtc tatgccacat ttcagctccc 480
 t 481

<210> 725
 <211> 971
 <212> DNA
 <213> Unknown (H38g574 nucleotide)

<220>
 <223> Synthetic construct

<400> 725
 cacacagagc cacggaatct cacaggtgtc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagccggt cctcgctttg ctgtccctgt ccctgtccat gtatctggtc 120
 acggtgctga ggaacctcct cagtatcctg gctgtcagct ctgactcccc cctccacacc 180
 cccatgtact tcttcctctc caacctgtgc tgggctgaca tcgggtttcac ctcggccatg 240
 gttcccaaga tgattgtgga catgcagtcg catagcagag tcactctctca tgagggtgc 300
 ctgacacaga tgtttttctt ggtccttttt gcatgtatag aaggcatgat cctgactgtg 360
 atggcctatg actgctttgt agccatctgt cgccctctga attaccagat catcgtgaat 420
 cctcacctct gtgtcttctt cattttgatg tcctttttcc tttagcctgtt ggattcccag 480
 ctgcacagtt ggattgtggt acaattcaca atcatcaaga atgtggaaat ctctaatttt 540
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 ttcacatatt tccatagtag tatgtttgct tttcttccca tttcagcaat cctttttatct 660
 tactataaaa tcgtcacctc cattctcagg atttcatctt cagatgggaa gtataaagcc 720
 ttctccacct gtgactctca cctagcagtt gtttgcgtat tttatggaac agacattggg 780
 atgtacctga cttcagctgt gtcaccacct cccaggaatg gtgtagtggc gtcaatgatg 840
 tacgctgtgg tcacccccat gctgaacctt ttcacttaca gcctgagaaa cagggacata 900
 caaagtgcct tgcggaggct gcgcagcaga acagtcgaat ctcatgatct gttccatcct 960
 ttttcttggt t 971

<210> 726
 <211> 960
 <212> DNA
 <213> Unknown (H38g575 nucleotide)

<220>
 <223> Synthetic construct

<400> 726
 cacacaaagc cacggaatct cacaggtgtc tgagaattcc tcctcctggg actctcagag 60
 gatccagaac tgcagcccat cctggctggg ctgtccctgt ccatgtatct ggtcacgggtg 120
 ctgaggaacc tgctcatcat cctggctgtc agctctgact cccacctcca cactcccattg 180
 tgcttcttcc tctccaacct gtgctgggct gacatcggtt tcacctcggc cacggttctt 240
 aagatgattg tggacatgca gtcgcatagc agagtcactt cttatgaggg ctgcctgaca 300
 aggatgtctt tcttggtcct ttttgcatgt acagaagaca tgcttctgac tgtgatggcc 360
 tatgactgct ttgtagccat ctgtcgccct ctgcactacc cagtcactgt gaatcctcac 420

ctctgtgtct	ttttcatttt	ggtgtccttt	ttccttagcc	tgttggttc	ccagctgcac	480
agttagggtg	tattacaatt	caccttcttc	aataatgttg	aaatctctaa	ttttgtctgt	540
gagccatctc	aacttgtcaa	ccttgccagt	tctgacagcg	tcgtcaatag	catattcata	600
tatttcgata	gtactatggt	tggttttctt	cccatttttag	gggtcctttt	gtctcaactat	660
aaaattgtcc	cctccattct	aaggatttca	tcgtcagatg	ggaagtataa	agtcttcgct	720
acctgtggct	ctcacctggc	agttgtttgc	tgatttgatg	gaacaggcat	tgacatgtac	780
ctgacttcag	ctgtgtcacc	acccacagc	aatggtgttg	tggcatcagt	gatgtatgct	840
gttttcaccc	ccatgctgaa	ccctttcatc	tacagcctga	gaaacaggga	catacaaagt	900
gccctgcgga	ggctgctcag	cagaacagtc	gaatctcatg	atctgttcca	tcctttttct	960

<210> 727

<211> 806

<212> DNA

<213> Unknown (H38g576 nucleotide)

<220>

<223> Synthetic construct

<400> 727

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aaactagact	cccacctata	cacacctgtt	gtatatTTTT	taatcaaaca	catatttttc	120
attgattttt	acaattgtat	tgttattttac	accaataaaa	tgttaaattt	tgttggtggat	180
cagaataaca	tttctatta	tgcagtgtcc	acacatatga	ctttcttatg	ttcattatca	240
ctgaactttt	aatcttggtg	agcatggcct	atgattgcta	tgtggtgaac	tccaaccctt	300
tgttttacat	tgttatcatg	tgtctgtgac	tgtaacatgt	gctgatgagc	attccatacc	360
tctgtaatac	atttcaatct	ctaattatca	caatgacctt	tttttgacct	tctgtagctt	420
tatcatcagt	catttctatt	gttatgatgt	tctcttcttc	catatgctat	gctcaaatgc	480
acaggaaaga	gaattgttga	tcacactgct	tacagcattt	aatttgatcc	ctacctcctg	540
gtattgctag	tgttaaacad	tctgattttg	ttagccatat	gttgaatgca	ttctgcaactg	600
ggcaggaaaa	aagctttctc	catgtgtggg	tctcatctta	caatggtggg	tatgttctat	660
ggatctctac	tttttgatat	ggataaatgg	cctccttggt	ctacacttta	atgatectca	720
ggtttaacct	cttgatctac	agcttttagc	acttaggggt	taaaaatgtc	ttttatagag	780
tctttaagaa	ttagtgcaaa	ctttgt				806

<210> 728

<211> 384

<212> DNA

<213> Unknown (H38g577 nucleotide)

<220>

<223> Synthetic construct

<400> 728

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gagatggaga	tctttctctc	ttgcatcttc	tcgcatcttc	atgccttcag	tctactgagg	120
aatggcatga	acatgggact	cacctatctg	gatgacagag	acgacagact	acacaccctc	180
atatacatTT	tcctctcaca	cctggccatc	aatgacatgt	actatgcttc	caacaatggt	240
ccaaagaggc	aggtgaacca	aatgaaccag	aaaaaaaaaa	actttgttct	atggataaag	300
cagatatttt	tgtatttggc	ttttgctcac	acagagtgcc	taatttaggc	aatgatgtcc	360
tgtaatagat	atgtggcaat	ctgc				384

<210> 729

<211> 921

<212> DNA

<213> Unknown (H38g578 nucleotide)

<220>

<223> Synthetic construct

<400> 729

atgggccaac	acaatctaac	agtgctaact	gaattcattc	tgatggaact	cacaaggcgg	60
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cctgagctgc	agattccccct	ttttggagtc	ttcctcgtca	tctacctaat	cacagtgggtg	120
ggcaacctaa	ctatgatcat	tttgaccaa	ctggactccc	acttacatac	acctatgtac	180
ttttctatca	gacatttggc	ttctgttgat	cttggtaatt	ctactgtcat	ttgtcccaag	240
gtgctggcaa	atthttgtgt	ggatcgaaat	actatttcct	attatgcatg	tgctgcacag	300
ctggcattct	tccttatgtt	cattatcagt	gaatttttca	tcctgtcagc	catggcctat	360
gaccgctatg	tggccatttg	taacctctcg	ctctattatg	ttattatgtc	tcagcgactg	420
tgtcatgtac	tgggtgggcat	tcaatatctc	tacagcacat	ttcaggctct	gatgttcact	480
attaagattt	ttacattgac	cttctgtggc	tctaattgtca	tcagtcatth	ttactgtgat	540
gatgttcctt	tgctacctat	gctttgctca	aatgcacagg	aaatagaatt	gttgagcata	600
ctattttctg	tatttaattt	gatctcctcc	tttctgatag	tcttagtgte	ctacatgttg	660
atthttgttag	ctatatgtca	aatgcattct	gcagagggca	ggaaaaaggc	tttctccaca	720
tgtggttccc	atthtgacagt	gggtggttgtg	ttctatgggt	ctctactctt	catgtacatg	780
cagcccaatt	ccactcactt	ctttgatact	gataaaatgg	cttctgtgtt	ttacacttta	840
gtaatcccca	tgcttaacct	tttgatttac	agcttaagaa	acgaagaggt	gaaaaatgcc	900
ttctataagc	tctttgagaa	t				921

<210> 730

<211> 654

<212> DNA

<213> Unknown (H38g579 nucleotide)

<220>

<223> Synthetic construct

<400> 730

ttgcctgaca	tcagttttcac	ctccaccaca	gtccccaaga	tgattgtgga	catccaatct	60
cacagcagag	tcacttccta	tgcaggctgc	ctgactcaga	tgtctctctt	tgctattttt	120
ggaggcatgg	aagagaggca	tgctcctgag	tgtgatggcc	tatgactggg	ttgtagccat	180
ctgtcaccct	ctatatcatt	cagccatcat	gaaccctgtg	ttctgtggct	tcctagtttt	240
gttgcctttt	tttttctcag	tcttttagat	gccagctgc	acaacttgat	tgctttacaa	300
gtgacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gtgacccttc	tcaactcccc	360
catcttgcat	gttgtgacac	cttcaccatt	aacataatca	tgtattttcc	tgccgccata	420
tttggttttt	ttcccatctc	ggggaccctt	ttctcttact	ctaaaattgt	ttcctccatt	480
ctgagggttt	catcgtcagg	tgggagggtat	aaagccctct	ccacctgtgg	gtctcacgtg	540
tcagttgttt	gctgagttta	tggaaacaggc	gttggagggt	acctcagttc	ggatgtgtca	600
ttttcccca	gaaagggtgc	agtggcctca	gtgatgtacg	cggttgtcac	cccc	654

<210> 731

<211> 683

<212> DNA

<213> Unknown (H38g580 nucleotide)

<220>

<223> Synthetic construct

<400> 731

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cccaaagatg	attgtggaca	tccagtctca	cagcagagtc	acctcctatg	caggctgcct	120
gactcagatg	tctctctttg	ccatttttgg	aggcatggaa	gagagacatg	ctcctgagtg	180
tgatggccta	tgaccggttt	gtagccatct	gtcaccctct	atgtcattca	gccatcacga	240
accctgtgtt	ctgtggcttt	ctagttttgt	tgtctttttt	ttttctcagt	cttttagacg	300
cccagctgca	caacttgatt	gccttacaaa	ggacctgctt	caaggatgtg	gaaattccta	360
atthcttctg	tgacccttct	caattccccc	gtcttgcatt	ttgtggcacc	ttcaccaata	420
acataatcat	gtatttcctt	gcagccatat	ttggttttct	tcccatctcg	gggacccttt	480
tctcttacga	taaaattgtt	ttctccattc	tgagggtttc	atcatcaggt	gggaagcata	540
aggccttctc	caccaggggg	tctcacctgt	cagttgtttg	ctgattttat	ggaacaggca	600
ttggaggcta	cctcagttca	gatgtgtcat	cttccccgag	aaaggetgca	gtggcctcag	660
tgatgtacac	ggtggccatc	ccc				683

<210> 732

<211> 582

<212> DNA

<213> Unknown (H38g581 nucleotide)

<220>

<223> Synthetic construct

<400> 732

tactttttcc	tctccaacct	ctcettcttg	gacctctgtt	tcaccataag	ttgtgtcccc	60
gggatgctgg	tcaacctctg	ggagccaaag	aagaccatca	tcttactggg	ctgctctgtc	120
cagttcttca	tcttctctgc	cctggggacc	actgagtgc	tcctcctgac	ggatgaggcc	180
tttgaccgct	acatggctat	ctgccagccc	ctccactatg	ccaccatcgt	ccacctctg	240
ctgtgctggc	agctggcatc	tgtggcctgg	gtcatgagtc	tggtagagtc	agtgggccag	300
acaccatcca	ccctccactt	gcctttctgc	cccgatcggc	aggtggatga	ttttgtctgt	360
gaggtcccag	ctctaattcg	actctcctgt	gaagacacct	cctacaatga	aatccagttg	420
gctgttgcca	gtgtcttcat	cttggctgtg	cctctcagcc	tcctccttgt	ctcttatgga	480
gccattgcct	gggcagtgtc	aaggactaac	tctgcaaaag	ggcagaggaa	agcttttggg	540
acctgtcctc	cccctctcac	tgtggtcacc	ctcttctaca	gc		582

<210> 733

<211> 959

<212> DNA

<213> Unknown (H38g582 nucleotide)

<220>

<223> Synthetic construct

<400> 733

atggtcagtt	ccaatcagac	ctccccctgtg	ctgggggttcc	ttctcctggg	gctctctgcc	60
catccaaagc	tggagaagac	attcttctgtg	ctcctcctgc	tgatgtacct	ggtgatccta	120
ctgggcaatg	gggtcctcat	cctgggtgacc	atccttgact	cccgcctgga	cacacccatg	180
tacttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacctc	ctcatccttg	240
acagcttcct	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagta	cagatgttcc	300
tctcccttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggcg	tttgatcgct	360
acgtggccat	ctgcaacccc	ctttgggtacc	ctgaagtcac	gaacaaagct	acttatgtgc	420
ccatggctgc	tggctcctgg	gtagctggaa	gcctcactgc	catggtgcag	acaccccttg	480
cattgaggct	gcccttctgt	ggagacaaca	tcataatca	cttcacctgt	gagattctgg	540
ctgtcctgaa	gttggcctgt	gctgatatct	ctgtcaatgt	gatcagtatg	ggagtggcca	600
atgtgatctt	cctgggggtc	cctgttctgt	tcactctctt	ctcctatgtc	ttcatcattg	660
ccaccatcct	gaggatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	acctgctctg	720
cccacctcac	tgtcgtgac	gtcttctacg	ggaccatcct	cttcatgtac	gggaagccca	780
agtctaagga	cccactggga	gcagacaaac	aggaccttgc	agacaaactc	atttcccttt	840
tctatggggt	ggtagacccc	atgctcaacc	ccatcatcta	cagcctgagg	aacaaggaag	900
tgaaggctgc	tgtgaggaac	ctggtatttc	agaaacgctt	cctgcagtga	tgggtggagg	959

<210> 734

<211> 954

<212> DNA

<213> Unknown (H38g583 nucleotide)

<220>

<223> Synthetic construct

<400> 734

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cacccaaagc	tggagaaaac	gttctttgtg	ctcctcctgc	tgatgtacct	ggtgatccta	120
ctgggcaatg	gggtcctcat	cctgatgact	gtgtccaaact	cccacctgca	catgcccattg	180
tacttcttcc	tggggaacct	ctccttctctg	gacatctgct	atacaacata	ctcagtcctcc	240
ctcctccttg	acagcttctt	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagtg	300
cagatgttcc	tctcctttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggcg	360
tttgatcgct	acgtggccat	ctgcaacccc	cttaggtacc	ctgtgggtcat	gagcaaggct	420
gcctacatgc	ccatggctgt	cggctcctgg	gtagctggaa	gcactgcttc	catggtgcag	480

acatcccttg	caatgaggct	gcccttctgt	ggagacaaca	tcataaatca	cttcacctgt	540
gagattctgg	ctgtccagaa	gttggcctgt	gctgatattct	ctgtcaatgt	gatcagtatg	600
ggagtgacca	atgtgatctt	cctgggggtc	ccggttctgt	tcattctctt	ctcctatgtc	660
ttcatcattg	ccaccatcct	gaggatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	720
acctgctctg	cccacctcac	agtcgtggtc	atcttctatg	ggaccatcct	cttcattgtat	780
gggaagccca	agtctaagga	cccgtggggg	gcagacaagc	aagactttgc	agacaaactc	840
atttcccttt	tctatggggg	ggtgaccccc	atgctcaacc	ccatcatcta	cagcctgagg	900
aacaaggatg	taaaggctgc	tgtgagggac	ttgatatttc	agaaatgctt	tgcc	954

<210> 735

<211> 962

<212> DNA

<213> Unknown (H38g584 nucleotide)

<220>

<223> Synthetic construct

<400> 735

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cacccatagg	tggaagagac	attcttttgtg	ttcatcctgc	tggtgtacct	ggtgatcctg	120
ctgggcaacg	gggtcctcat	cctgggtgacc	atccttgact	cccgcctgca	cacacccatg	180
tactttcttc	tggggaacct	ctccttctctg	gacatctgct	atacaacctc	ctcatccttg	240
acagcttctt	gacccccagg	aaaaccatct	ccttctcagc	ctgtgcagta	cagatgttcc	300
tctcctttgc	catgggagcc	acagagtgtg	ttctcctgag	catgatggct	tttgatcaact	360
acctggacat	gtgcaacccc	cttaggtacc	ctgtgggtcat	gagcaaggct	gcctacatgc	420
ccatggctgt	tggtctcctg	gcagctggta	tcaccaactc	tgtagtacag	atatccctag	480
caatgtgact	gcccttctgt	ggggacaatg	tcataaatca	cttcacctgt	gagatcctgg	540
cagttctaaa	gttggcctgt	gctgacatct	gcataacgt	gatcagcatg	gttgtgacca	600
acatgatctt	ccttgcaactc	ccagtctctgt	ttatttttgt	ctcatatgtc	ttcatcattg	660
ccaccatcct	gagaatcccc	tcagctgagg	ggaggaaaaa	ggccttctcc	acctgctctg	720
cccacctcac	tgctgtgac	gtcttctatg	ggatgatcct	cttcattgtat	gggaagccca	780
agttctaagga	cccaatggga	gcagacaaac	aggaccttgc	agacaaactc	atctccattt	840
tctatggagt	ggtgaccccc	attctcaacc	ccatcatcta	cagcccgagg	aacaaagatt	900
tgaagctgc	tatgaggaac	ctgggtggctc	aaaaacacct	aacagagtga	ctatcacaga	960
tc						962

<210> 736

<211> 375

<212> DNA

<213> Unknown (H38g585 nucleotide)

<220>

<223> Synthetic construct

<400> 736

agactaaatg	tcatacagtc	cctgccccttc	tatgggggaca	tcataaacca	cttgacctgt	60
gaggctcctg	ctgtcctgaa	gttggcctgt	gctgacatct	ctatcaacat	gatcaggcaa	120
aaggccttct	ccacctgctc	tgcccacctc	acagttgtgg	tcattcttcta	caggaccatc	180
ctcttcacgc	atgggaagcc	caagtccaag	gacccactgg	gggcagacaa	gcaggatttt	240
gcagacaaac	tcattctcct	ctcctatgga	gtggtcaccc	ccatgctgaa	caccatcatc	300
tacagcctga	ggaaaaagg	tgtgaaggct	gctgtgaaga	acctggtatt	tcagaaaacc	360
ctaactgaat	gacag					375

<210> 737

<211> 648

<212> DNA

<213> Unknown (H38g586 nucleotide)

<220>

<223> Synthetic construct

<400> 737

tttgttgaca	tgggtttaac	gtcctccaca	gttaccaaga	tgctgggtgaa	tatacagact	60
cggcatcaca	ccatcaccta	tacgggttgc	ctcacgcaaa	tgtatttctt	tctgatgttt	120
ggtgatctag	acagcttctt	cctggctgcc	atggcgtagt	accgctatgt	ggccatctgc	180
cacccctct	gtactccac	ggcatgagg	ccccagctt	gtgcccta	gcttgcatgt	240
tgctgggtcc	tcaccaatat	cgttgccctg	actcacacgt	tcctcatggc	tcggttgtcc	300
ttctgtgtga	ctggggaaat	tgctcacttt	ttctgtgaca	tcactcctgt	cctgaagctg	360
tcagtgtctg	acaccacat	caacgagatg	atgggtttttg	tcttgggagg	caccgtactc	420
atcgteccct	ttttatgcat	tgtcacctcc	tacatccaca	ttgtgccagc	tatcctgagg	480
gtccgaaccc	gtgggtgggt	gggcaaggcc	ttttccacct	gcagttccca	cctctgcgtt	540
gtttgtgtgt	tctatgggac	cctcttcagt	gcctacctgt	gtcctccctc	cattgcctct	600
gaagagaagg	acattgcagc	agctgcaatg	tacaccatag	tgactccc		648

<210> 738

<211> 957

<212> DNA

<213> Unknown (H38g587 nucleotide)

<220>

<223> Synthetic construct

<400> 738

atggaaaaag	ccaatgagac	ctccccctgtg	atgggggttcg	ttctcctgag	gctctctgcc	60
caccagagc	tggaaaagac	attcttctgtg	ctcatcctgc	tgatgtacct	cgtgatcctg	120
ctgggcaatg	gggtcctcat	cctggtgacc	atccttgact	ccgcctgca	cacgcccag	180
tacttcttcc	tagggaacct	ctccttctctg	gacatctgct	tcactacctc	ctcagtecca	240
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cagatggcac	tctcctttgc	catggcagga	acagagtgtc	tgctcctgag	catgatggca	360
tttgatcgct	atgtggccat	ctgcaacccc	cttaggtact	ccgtgatcat	gagcaaggct	420
gcctacatgc	ccatggctgc	cagctcctgg	gctattgggtg	gtgctgcttc	cgtggtacac	480
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gaggtgacga	atgtgatctt	cctaggagtc	ccggttctgt	tcactctctt	ctcctatgtc	660
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gggaagccta	agtctaagga	ctccatggga	gcagacaaag	aggatctttc	agacaaactc	840
atcccccttt	tctatgggtt	ggtgaccccg	atgctcaacc	ccatcatcta	tagcctgagg	900
aacaaggatg	tgaaggctgc	tgtgaggaga	ctgctgagac	caaaaggctt	cactcag	957

<210> 739

<211> 653

<212> DNA

<213> Unknown (H38g588 nucleotide)

<220>

<223> Synthetic construct

<400> 739

ctgcctgaca	tcggttttcac	ctccaccacg	gtccccaaga	tgatttgtgga	catccagtct	60
cacagcagag	tcattctcta	tgcaggctgc	ctgactcaga	tgtctctctt	tgccattttt	120
ggaggcatgg	aagagagaca	tgctcctgag	tgtgatagcc	tatgagcggg	ttgtagccat	180
ctgtcacctc	ctatatcatt	cagccatcat	gaacccatgt	ttctgtggct	ttctagtttt	240
gttgtctttt	tttttctcag	tcttttagac	gccagctgc	acaacttgat	tgccctacaa	300
aggacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gtgaccttcc	tcaactcccc	360
atcttgcata	ttgtggcacc	ttcaccaata	acataatcat	gtatttccct	gccgccatat	420
ttggttttct	tcccatctcg	gggacctttt	tctcttacia	taaaattggt	ttctccattc	480
taagggttcc	atcatcaggt	gggaagtata	aggccttctc	cacctgtggg	tctcacctgt	540
cagttgtttg	ctgattttat	ggaacaggca	ttggaggcta	cctcggttca	gatgtgtcat	600
cttccccgag	aaaggctgca	gtggcctcag	tgatgtacac	ggtgggtcac	ccc	653

<210> 740

<211> 648
 <212> DNA
 <213> Unknown (H38g589 nucleotide)

<220>
 <223> Synthetic construct

<400> 740
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 gggagtcagg ccatttcctt ctctgggtgt ctcaccagc tgtattttct cgctgtgtgt 120
 ggtaacatgg acaatttcct gctgggtgtg atgtcctatg accgatttgt ggccatatgc 180
 caccctttac actacacaac aaagatgacc cgacagctct gtgtcctgct tgttgtgggg 240
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 gtcaccccat ttgtctgcat cctcatctcc tacatccaca tcacctgtgc tgtcctcaga 480
 gtctcatccc ccaggggagg atggaaatcc ttctccacct gtggctccca cctggctgtg 540
 gtctgcctct tctatggcac cgtcatcgct gtgtatttca acccatcatc ctctcactta 600
 gctgggaggg acatggcagc tgcagtgatg tatccagtgg tgacccca 648

<210> 741
 <211> 988
 <212> DNA
 <213> Unknown (H38g590 nucleotide)

<220>
 <223> Synthetic construct

<400> 741
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 ccagggctgc aggcgcccct gttcctggtg ttcttggtca tctacctcat caccctgggtg 120
 ggcaaccctg gcctgatggc tctcatctgg aaggaccccc accttcacac ccccatatac 180
 ttatttcttg gcagtttagc ctttgcagat gcatgcactt catcctctgt aacttctaag 240
 atgcttatca atttttttat caaagaatca tatgctatcc atggctaagt gtgccaccca 300
 gttttacttt tttggttcca atgcaaccac agaatgcttc ctgctggtag tgatggccta 360
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 ctgtactcag tttataggta ttctcatatt tattggtttt ctgcattcag cgattcatgt 480
 gggtttggtt tttagattaa ctttctgcag gtccaatatt atacattatt tctactgtga 540
 aattttacag ctgttcaaaa tttcttgcac caatcctaca gttaataatac ttctgatttt 600
 catcttttca gcatttatac aagtcttcac ttttatgact cttatcgtct cttactccta 660
 tattctctct gccatcctga aaaagaagtc tgagaagggt agaagcaaag ccttctctac 720
 ttgcagtgcc catctgctct ctgtctcttt gttctacggc accctcttct tcatgtatgt 780
 gagttctagg tctggatcag ctgcagatca ggccaaaatg tattctttat ttacacaaat 840
 aataattcct ttactaaatc cttttattta cagcctaagg aacaaagagg ttatagatgc 900
 cctgagaaga atcatgaaga aataaatagt tgtcagacaa cattcaaacc atttcttctt 960
 tatattctgc tgaagaaaac cccaagtc 988

<210> 742
 <211> 636
 <212> DNA
 <213> Unknown (H38g591 nucleotide)

<220>
 <223> Synthetic construct

<400> 742
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 cctcgtacaa tgcttgtgct gctcagatgt tcttttttgt agccttggcc acagtggaaa 120
 atatcgctgt tgacatcaat ggcctatgac cactatatag cagtgtgcaa acccctacac 180
 tacaactacca ccacgatagc cagtgtatgt gctcatctgg tcataggctc ctatgtctgt 240
 ggcttttctaa atgcctccct ccgcattgtg gacatattca gtctctcttt ctgtaagtcc 300

aatcttgtcc	atcacctttt	ctgtgatgtt	ccaccagtca	tggtctgtgc	ttgctctggt	360
aaacacatta	gcaagaagat	tctgggtttt	atgtcaagct	tcaatgtctt	tttggctctt	420
ctagttatct	tgacctccta	cctgttcata	ttcatcacca	tcttgaagat	gcactcagct	480
cagggacact	taaaagcttt	gtccacctgt	gcctctcacc	tcattgcagt	ctccatcttc	540
tatggaacta	ctatctttat	gtacttacag	cctagctcca	gccattccat	ggacacagat	600
gaaatggcat	ccttgttcta	tgctgtgttc	atctcc			636

<210> 743

<211> 942

<212> DNA

<213> Unknown (H38g592 nucleotide)

<220>

<223> Synthetic construct

<400> 743

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gagatggaag	tgctcctctt	ctggatcttc	tccctgttat	atctcttcag	cctgctgggg	120
aatgggggca	tctttgggct	catctgcctg	gactctaagc	ttcacacccc	catgtacttc	180
ttcctctcac	acctggccgt	cattgacatg	tcctatgctt	ccaacaatgt	tcccaagatg	240
ctggcaaacc	tagtgaacca	gaaaagaact	atctcgttca	tctcttgcat	aatgcagact	300
tttttgtatt	tggtctttgc	tgttacagtg	tgctgtattt	tggtgggtgat	gtcctatgac	360
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ctcattctga	ggctgccctt	ctgtggggcc	caggagggtga	accacttctt	cgggtgaaatc	540
ctgtctgtcc	tcaagttggc	ctgtgctgac	acctggctca	accagggtgtt	catctttgca	600
gctgcatgt	tcactcctgg	aggggtgactc	tgctgtgtgc	tggtctccta	cttgcacatc	660
ctggcgggcca	tcttgaggat	ccagtctggg	gagggccgca	gaaaggcctt	ctctacctgc	720
tcctcccacc	tctgcgtggt	ggggcttttc	tttggcagcg	ccattgtcat	gtacatggcc	780
cccaagtcaa	gccattctca	agaacggagg	aagatccttt	ccctgtttta	cagccttttc	840
aaccggatcc	tgaaccccct	catctacagc	cttaggaatg	cagagggtgaa	aggggctcta	900
aagagagtcc	tttggaacaa	gagatcaatt	gaagaatcat	tt		942

<210> 744

<211> 648

<212> DNA

<213> Unknown (H38g593 nucleotide)

<220>

<223> Synthetic construct

<400> 744

ttctctgacc	tctgcttctc	ttcctgacc	attcccaagt	tggtacagaa	catgcagaac	60
caggacccat	ccatccccta	tgcggaactgc	ctgacccaaa	tgtacttctt	cctgttatatt	120
ggagacctgg	agagcttcct	ccttgtggcc	atggcctatg	accgctatgt	ggccatctgc	180
ttcccctgc	actacaccgc	catcatgagc	cccatgctct	gtctcgccct	ggtggcgctg	240
tcctgggtgc	tgaccacctt	ccatgccatg	ttacacactt	tactcatggc	caggttgtgt	300
ttttgtgcag	acaatgtgat	ccccactttt	ttctgtgata	tgtctgctct	gctgaagctg	360
gccttctctg	acactcgagt	taatgaatgg	gtgatattta	tcattggagg	gctcattctt	420
gtcatcccat	tcctactcat	ccttgggtcc	tatgcaagaa	ttgtctcctc	catcctcaag	480
gtcccttctt	ctaagggtat	ctgcaaggcc	ttctctactt	gtggctccca	cctgtctgtg	540
gtgtcactgt	tctatggaac	cgttattggt	ctctacttat	gctcatcagc	taatagtctt	600
actctaaagg	acactgtcat	ggctatgatg	tacactgtgg	tgaccccc		648

<210> 745

<211> 936

<212> DNA

<213> Unknown (H38g594 nucleotide)

<220>

<223> Synthetic construct

<400> 745
 atggatggag agaatcactc agtgggtatct gagtttttgt ttctgggact cactcattca 60
 tgggagatcc agctcctcct cctagtgttt tcctctgtgc tctatgtggc aagcattact 120
 ggaaacatcc tcattgtgtt ttctgtgacc actgaccctc acttacactc ccccatgtac 180
 ttctactagg ccagtctctc cttcattgac ttagggacct gctctgtcac ttctcccaag 240
 atgatttatg acctgttcag aaagcgcaaa gtcctctcct ttggaggctg catcgctcaa 300
 atctttctca tcacgctcgt tgggtggtgt gagatggtgc tgctcatagc catggccttt 360
 gacagatatg tggccctatg taagccctc cactatctga ccattatgag cccaagaatg 420
 tgcctttcat ttctggctgt tgcctggacc cttgggtgtca gtcactccct gttccaactg 480
 gcattttctt ttaatttagc cttctgtggc cctaattgtt tggacagctt ctactgtgac 540
 cttcctcggc ttctcagact agcctgtacc gacacctaca gattgcagtt catggctact 600
 gtttaacagt gggtttatctg tgtgggtact ttcttcatac ttctaattct ctacgtcttc 660
 atcctgttta ctgtttggaa acatttctca ggtgggtcat ccaaggccct ttccactctt 720
 tcagctcaca gcacagtggc cttttgttcc tttgggtccac ccatgtttgt gtatacacgg 780
 ccacacccta attcacagat ggacaagttt ctggctatct ttgatgcagt tctcactcct 840
 tttctgaatc cagttgtcta tacattcagg aataaggaga tgaaggcagc aataaagaga 900
 gtatgcaaac agctagtgtt ttacaagagg atctca 936

<210> 746

<211> 384

<212> DNA

<213> Unknown (H38g595 nucleotide)

<220>

<223> Synthetic construct

<400> 746
 atgaactcag agaacctcac ccggggccgag gttgccccct ctgaattcgt cctcctgggc 60
 atcacaaatc gctgggacct gcgtgtggcc ctcttctctga cctgcctgcc tgtctacctg 120
 gtgagcctgc tgggaaacat gggcatggcg ctgctgatcc gcattggatgc ccggctccac 180
 acacctatgt acttcttctc ggccaacctc tccctgctgg atgcctgcta ttctcggcc 240
 atcggcccca agatgctagt ggacctgtcg ctgccccgag ccaccatccc ttacacagcc 300
 tgtgccctcc agatgtttgt ctttgcaggc ctggctgata ctgagtgttc aatgcaatta 360
 atgccaaaag tgaacccaaa tgta 384

<210> 747

<211> 810

<212> DNA

<213> Unknown (H38g596 nucleotide)

<220>

<223> Synthetic construct

<400> 747
 atgaccattg tcttgctttc agctctggat tcccggctgc acacaccaat gtatttcttt 60
 ttggcaaacc tctcattcct ggacatgtgt ttcaccacag gttccatccc tcagatgtct 120
 tacaaccttt ggggtccaga taagaccatc agctatgtgg gttgtgccat ccagctgtac 180
 tttgtcctgg ccctgggagg ggtggagtgt gtccctcctg ctgtcatggc atatgaccgc 240
 tatgctgcag tctgcaaacc cctgcactac accatcatca tgcacccacg tctctgtgga 300
 cagctggcct cagtggcatg gctgagtggc tttggcaatt ctctcataat ggcaccccag 360
 acattgatgc taccctcgctg tgggcacaga cgagttgacc actttctctg tgagatgcca 420
 gcactaattg gtatggcctg tgtagacacc atgatgcttg aggcaactggc ttttgcctg 480
 gcaatcttta tcatcctggc accactcatc ctcatctctc tttcttatgg ttacgttgga 540
 ggaacagtgc ttaggatcaa gtcagctgct gggcgaaaga aagccttcaa cacttgcagc 600
 tcgcatctaa ttgttgtctc tctcttctat ggtacaatca tatacatgta cctccagcca 660
 gcaataactt attcccagga ccagggcaag tttcttaccc tttctctacac aattgtcact 720
 cccagtgtta accccctgat ctatacacta agaaacaaag atgttaaaga ggccatgaag 780
 aaggtgctag ggaaggggag tgcagaaata 810

<210> 748

<211> 342
 <212> DNA
 <213> Unknown (H38g597 nucleotide)

<220>
 <223> Synthetic construct

<400> 748
 atttgctttc ctctccacta tcccatccgt ataagcaaaa gagtgtgtgt gatgatgata 60
 acaggatctt ggatgataag ctctatcaac tcttgtgtct acacagtata tgcactctgt 120
 atcccatatt gcaagtccag agccatcaat cattttttct gtgatgttcc agctatgttg 180
 acgctagcct gcacagacac ttgggtctat gagagcacag tgtttttgag cagcaccatc 240
 tttcttgtgc ttcttttcac tggattgca tgttctatg gccgggttct ccttgcctgc 300
 taccgcatgc actctgcaga agggaggaag aaggcctatt ca 342

<210> 749
 <211> 635
 <212> DNA
 <213> Unknown (H38g598 nucleotide)

<220>
 <223> Synthetic construct

<400> 749
 tttgtggaca ttgcctgttc ctcagccaca gcacccaaga tgattgtaga ctctgtttct 60
 gagaaaaaga ctatttccta ctggggctgt ataactcaga tgtttacctt ccactttttt 120
 ggttgtgctg acatttttgt ttgactgtc atggcttttg atcgctatgc tgctatctgc 180
 caaccctcc gttacactgt catcatgagt gctaattgctt atactgtgct ggcatcactg 240
 tcctggttgg gggccctggg tcattccctt gtccagaccc tcctgacctt ccagctgccc 300
 ttctgtaatg ctcaggttat agaccattac ttttgtgatg tccaccagc cctaaaactt 360
 gccgtgtctg atacaactct ggtaagtatg ttggtgggtg ccaacagtgg tctcatctcc 420
 ctgggggtgtt tcctcattct tttggcctcc tacacagtca ttctgtttag tcttcaaaaa 480
 cagtctgcag agagctgaca caaagtcttc tctacctgtg gatctcatct gactatagta 540
 actttcttct ttgttccgtg tacctttatt tatctccatc cactacttcc ccattggata 600
 aagctgtgtc tgtgttctat accaccatca cccca 635

<210> 750
 <211> 633
 <212> DNA
 <213> Unknown (H38g599 nucleotide)

<220>
 <223> Synthetic construct

<400> 750
 tttgttgatt tctgttattc caccacaatt acacccaaac tgctggagaa cttgggtgctg 60
 gaagatagaa ctatctcctt cacaggatgc accatgcagt tattctttgt ctgcataatt 120
 gtagtaacag aaacatgcat gctggcagtg atggcctatg accgatatgt ggcgggtgtgt 180
 accctcttct ctacacagtt gcaatgtacc agaggctttg ctccctgtta gtggctacat 240
 catactgctg ggggtagtgc tgttccctga cacttaccta gtttctactg gagttatcct 300
 tcagaggaaa taatatcatt aataactttg tctgtgagca cgctgccatt gttgctgtgt 360
 cttgctctga cccctgtgtg agccagtaga tcactttagt ttctgccaca ttcaatgaaa 420
 taagcagcct gcttccatag ctttcatttt tatcactgtc atgaagacgg cttccactgg 480
 ggggcgcaag aaagcgttct ccacgtctgc ctccactga cggccattac cattttccat 540
 gggactattc ttttctctca ctgtgttctt aacgccaaaa gttcgtggct catggtcaag 600
 gtggcctctg gcttttacac agtggctcatg ccc 633

<210> 751
 <211> 646
 <212> DNA
 <213> Unknown (H38g600 nucleotide)

<220>

<223> Synthetic construct

<400> 751

ttttagtagaca	tctgtgttac	ctccaccaca	gtcccaaaga	cactgtcaaa	catccggaca	60
cagagtaaag	tcatcaccta	tgcagggtgc	atcaccacaga	tgtacttttt	tgtactcttt	120
atagtgttgg	acagcttact	cttgaccgtg	atggcctatg	accagtttgt	ggccatctgt	180
caccctctgc	actacacggg	catcgtgaac	cctcggctct	gtggactgct	ggttctggcg	240
tcctggatca	tgagtgcctt	gaattccttg	atagaaagct	taatgggtgt	gccactgctc	300
ttttgtacag	acttgaaaat	ccccacttt	ttctgtgaac	ttaatcagat	aatccgcagt	360
gcctgttctg	acacctttct	taatgacatg	gtgatgtatt	tgtcagctgt	gcttctaggt	420
aggggatgtt	tcactgggat	cctgtactct	tactttaaga	cagtttcttc	catacgtgca	480
atctcatcag	ctcaggggaa	gtacaaggca	ttttccacct	gtgcatcgca	cctctcagtt	540
gtctccttat	tttattgtat	gggccttggg	gtgtacctta	gtgctgctgc	aaccacaaac	600
tcactctcaa	gtgcaacagc	ctctgatgta	cactgtggtc	accccc		646

<210> 752

<211> 342

<212> DNA

<213> Unknown (H38g601 nucleotide)

<220>

<223> Synthetic construct

<400> 752

atattgctttc	ctctccacta	tcccatccgt	atgagaaaaa	gagtgtgtgc	actgatgata	60
acaggatctt	ggatgatagg	ctccatcaac	tcttgtgctc	acacgggata	tgcactccgt	120
atcccatatt	gcaagtcag	agccatcaat	cattttttct	gtgatgttcc	agctatgttg	180
accctagcct	gcacggatac	ctgggtctat	gagtgcacgg	tgtttttgag	caccaccatt	240
tttcttgtgt	ttcccttcat	ttgtattgca	tgttcctatg	gccggattct	ccttgtctgtc	300
taccacatgc	actctgcaga	agggaggaag	aaggcctatt	cg		342

<210> 753

<211> 648

<212> DNA

<213> Unknown (H38g602 nucleotide)

<220>

<223> Synthetic construct

<400> 753

cttgtcgatg	tctcctatgc	cacaagtgtg	gtccctcagc	tgtctggcaca	ttttcttgca	60
gaacataaag	ccatcccat	ccagagctgt	gcagcccagt	tattttttct	cctggccttg	120
ggtgggattg	agtttgttct	cctggcggtg	atgggctatg	accgctatgt	ggctgtgtgt	180
gatgcctgc	gatactcggc	catcatgcat	ggaggctgtg	gtgctagggt	ggccatcaca	240
tcctgggtca	gtggcttcat	cagctctcct	gtgcagactg	ctatcacctt	tcagctgccc	300
atgtgcagaa	acaagtattat	tgatcacata	tcctgtgaac	tcctagctgt	ggtcaggctg	360
gctcgtgtgg	acacctctc	caatgagggt	accatcatgg	tgtctagcat	tgttcttctg	420
atgacacctt	tctgcctggg	tcttttgtcc	tacatccaga	tcactctccac	catcctaag	480
atccagtcga	gagaagggaag	aaagaaagct	ttccacacgt	gtgcctctca	cctcacagtg	540
ggtgcctgtg	gctatgggtg	ggccattttc	acttacatcc	agccccactc	cagtcctctc	600
gtccttcagg	agaagttgtt	ctctgtcttt	tatgccattt	taacacca		648

<210> 754

<211> 635

<212> DNA

<213> Unknown (H38g603 nucleotide)

<220>

<223> Synthetic construct

<400> 754
 tttgtggaca ttgcctgttc ctcagccaca gcacccaaga tgattgaaga ctttgtttct 60
 gagaaaaaga ctatttccta ctggggctgt ataactcaga tgtttacctt ccactttttt 120
 ggttgtgctg agatttttgt cttgactgtc atggcttttg atcgctatgc tgctatctgc 180
 caacccctcc gttacactgt catcatgagt gctaatgctt atactgtgct ggcatactg 240
 tcctggttgg gggccctggg tcattccttt gttcagaccg tcctgacctt ccagctgccc 300
 ttctgtaatg ctcaggttat agaccattac ttttgtgatg tccacccagt cctaaaaactt 360
 gcctgtgctg atacaactct ggtaaataatg ttggtgggtg ccaacagtgg tctcatctcc 420
 ctgggggtgt tcctcattct tttggcctcc tacacagtca ttctgttttag tcttcaaaaa 480
 cagtctgcag agagctgaca caaagttctc tctacctgtg gatctcatct gactatagta 540
 actttcttct ttgttccgtg tatctttatt tatctccatc cactacttcc ccattggata 600
 aagctgtgtc tgtgttctat accaccatca cccca 635

<210> 755

<211> 342

<212> DNA

<213> Unknown (H38g604 nucleotide)

<220>

<223> Synthetic construct

<400> 755
 atatgcaaac ctttacttta tccagccatt atgaccaatg gactgtgcat ccggctatta 60
 atcttgtcat atgtagggtg tcttcttcat gctttaatcc atgaaggatt tttattcaga 120
 ctaaccttct gtaactccaa catagtacat cacatttact gtgacattat cccattgtct 180
 aagatttctt gtactgatcc ttctattaat tttctaattg tttttatttt ctcaggttca 240
 attcaggtat tcagcattgt gactattctt gtatcttata catttggttct cttcgcaatc 300
 ttaaaaagga aatctgataa aggtgtaagg aaagcctttt cc 342

<210> 756

<211> 333

<212> DNA

<213> Unknown (H38g605 nucleotide)

<220>

<223> Synthetic construct

<400> 756
 atttgtaacc ctctgagata ccccatcatc atgagcaggc acgtctgtgt gcagatggcc 60
 gccatctcct ggggtgacagg ctgtctgact gctctgtctg taactagtgt tgccctgcag 120
 atccccctct gtgggaatgt catcgaccat ttcacatgtg aaatccttgc agtgctaaaa 180
 ctagcttggt tgagttccct gctcgtggac atggttatgc tggtggtcag tattctcctg 240
 ctgcccaccc caatgctttt gatttgcac tcgtatggct tcatccttcc tacaattctg 300
 aggatcggt caacagaggg aagaacaaaa gct 333

<210> 757

<211> 665

<212> DNA

<213> Unknown (H38g606 nucleotide)

<220>

<223> Synthetic construct

<400> 757
 ttgcctgaca tcggtttcac ctccaccacg gtccccaaga tgattgtgga catccagtct 60
 cacagsagag tcattctcta tgcaggctgc ctgactcaga tgtctctctt tgccatttkt 120
 ggaggcatgg aagagagaca tgtctctgag tgtgatggcc tatggccggt ttgtagccat 180
 ctgtcaccct ctatatcgtt cagccatctt gaacccatgt ttctgtggct tcctagattt 240
 gttgtcttcg ttttgttttg ttttgttttt ctacgtcttt tagactccca gctgcacaac 300
 ttgattgcct tacaatgac cggtttcaag gatgtggaat tcctaatttc ttctgggaac 360

cttctcaact	ccccatcttg	catgttggtga	caccttcacc	aggaacatca	acctgtattt	420
ccctgctgcc	gtatttggtt	ttcttcccat	cttggggacc	ttttctctta	ctgtaaaatt	480
gtttctctca	ttctgaggg	ttcatcatca	ggtgggaagt	ataaaccttc	tccacctgtg	540
ggtctcacct	gccagttggt	tgctgatttt	gtggaacagg	tggtggaggg	taccttggtt	600
cagatgtgtc	atcttcccca	agaaagagtg	cagtgccttc	agtgatgtac	ccggtggtca	660
cctcc						665

<210> 758

<211> 646

<212> DNA

<213> Unknown (H38g607 nucleotide)

<220>

<223> Synthetic construct

<400> 758

ttttagaca	tctgtgttac	ctccaccaca	gtcccaaaga	cactgtcaaa	catccggaca	60
cagagtaaag	tcataccta	tgcagattgc	atcaccaga	tgtacttttt	tgtactcttt	120
atagtgttgg	acagcttact	cttgaccgtg	atggcctatg	accagtttgt	ggccatctgt	180
cacccctgc	actacacgg	catcgtgaac	cctcggctct	gtggactgct	ggttctggcg	240
tcctggatca	tgagtgcct	gaattccttg	atagaaagct	taatggtgtt	gccactgctc	300
ttttgtacag	acttgaaaat	ccccactttt	ttctgtgaac	ttaatcagat	aatccgcagt	360
gcctgttctg	acacctttct	taatgacatg	gtgatgtatt	tgtcagctgt	gcttctaggt	420
aggggatgtt	tcactgggat	cctgtactct	tactttaaga	cagtttcctc	catacgtgca	480
atctcatcag	ctcaggggaa	gtacaaggca	ttttccacct	gtgcatcgca	cctctcagtt	540
gtctccttat	tttattgtat	gagccttggg	gtgtacctta	gtgctgctgc	aaccacaac	600
tcactctcaa	gtgcaacagc	ctctgatgta	cactgtggtc	acccc		646

<210> 759

<211> 834

<212> DNA

<213> Unknown (H38g608 nucleotide)

<220>

<223> Synthetic construct

<400> 759

atggcaatta	ggaaccattc	caccctccac	aaacccatgt	actttttttt	agctaatatg	60
tcctttcttg	agatttggtg	tgctactgtc	actattccca	agatgcttgc	tggctttggt	120
ggatccaaac	aggatcatgg	acagctaate	tcctttgagg	gatgcatgac	acagctttac	180
tttttctctg	gcttgggctg	cactgagtg	gtccttctcg	ctgttatggc	caatgatcgc	240
tatatggcca	tctgctatct	tctccacaac	ccagtcattg	tcagtggccg	gctgtgtgtg	300
cagatggctg	ctggctcttg	ggctggaggt	tttggcatct	ccatgggtcaa	agtttttctt	360
atttcggggc	tctctaacgg	tgcccccaac	atcatcaacc	actttttctg	tgatgtctct	420
ccattgctca	acctctcatg	cactgatatg	tccacagcag	agcttacaga	tttcatcctg	480
gccattttta	ttcttctagg	gccactctct	gtcactgggg	cctcctatgt	ggccattact	540
ggtgctgtga	tgcacattcc	ttcggtgctg	ggacggtata	aggccttttc	cacctgtgcc	600
tctcattttca	atgtttgtgat	aattttttat	gcagccagta	tcttcattta	tgctcggcca	660
aaggcacttt	cagcttttga	caccaacaag	ttggtctctg	tactgtatgc	tgctcattgta	720
ccattgctca	atcccatcat	ttactgcctg	cgcaatcaag	aggcaagag	agccctatgc	780
tgtattttgc	acctgtacca	gcaccaggat	cctgacccca	agaaaggtag	caga	834

<210> 760

<211> 942

<212> DNA

<213> Unknown (H38g609 nucleotide)

<220>

<223> Synthetic construct

<400> 760

atggaattta	cagatagaaa	ctacacgttg	gtcactgagt	ttattctatt	agggtttcca	60
actgcacctg	aactgcagat	tgtcctgttc	ctcatgtttc	tgacattgta	tgctataatt	120
ctgataggga	acattggatt	gatgctgttg	atcaggattg	atcctcacct	tcaaaccccc	180
atgtattttt	tccttagcaa	cctatcattt	gtagaccttt	gctatttctc	agacattggt	240
cccaaatgc	tggtcaattt	cctctcggag	aacaaatcta	tttcctatta	tgggtgtgcc	300
ctgcagtttt	atTTTTtctg	tacttttgca	gatacagaat	ccttcaccc	ggccgccatg	360
gcctatgata	gctatgtcgc	catctgtaac	cctttattgt	acacagttgt	gatgtctagg	420
ggcatctgta	tgcggttgat	tgtcttgta	tacctggag	gcaacatgag	ttccctgggt	480
cacacatcct	ttgcctttat	tctgaaatat	tgtgacaaaa	atgttattaa	tcattttttc	540
tgtgacctcc	ctcccttgct	taaactatcc	tgcactgaca	caacaattaa	tgagtggctc	600
ctctccacat	acggcagctc	agtggaaatc	atttgtttta	tcatcatcat	catctcctac	660
tttttcattc	ttctctcagt	cttaaagatc	cgtctcttca	gtgggaggaa	gaagaccttt	720
tctacatgcg	ctctcaccct	gacttcagtg	acgatctacc	aagggtactc	cctctttatt	780
tactcacggc	ccagctacct	gtattctcca	aacactgata	aaattatctc	agtgttctac	840
accattttca	ttccagtgtc	gaatccgttg	atttatagtt	tgagaaataa	agatgtaaag	900
gatgcagctg	agaaagttct	aagatcaaa	gtagattcct	ca		942

<210> 761

<211> 948

<212> DNA

<213> Unknown (H38g610 nucleotide)

<220>

<223> Synthetic construct

<400> 761

atggataacc	aaagctccac	accggggttc	ctccttcttg	gcttctctga	acaccaggg	60
ctgggaagga	ctctcttcgt	ggatgtcatc	acttcctacc	tcctaaccct	agtgggcaac	120
acactcatca	tcctgctgtc	tgcgctggac	accaagctcc	actctccaat	gtactttttc	180
ctctccaacc	tctccttctt	ggacctctgt	ttcaccacga	gttgtgttcc	ccaaatgctg	240
gccaacctct	ggggcccaaa	gaagaccatc	agcttccttg	actgctctgt	ccagatcttc	300
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tacgtggctg	tctgccagcc	cctccactat	gccaccatca	tccacccccg	cctgtgctgg	420
cagctggcat	ctgtggcctg	ggtcattggg	ctagtggggt	cagtgggtcca	gacaccatcc	480
accctgcacc	tgccttcttg	ccccgatcgg	cagggtggatg	attttgtctg	tgagggtccca	540
gctctaattc	gactctcctg	tgaagacacc	tctacaatg	agatccagggt	ggctgttgcc	600
agtgtcttca	tcttggttgt	gcctctcagc	ctcatccttg	tctcttacgg	agccattacc	660
tgggcagtg	tgaggattaa	ctccgccaca	gcattggagaa	aggccttttg	gacctgtctc	720
tcccatctca	ctgtgggtcac	cctcttctac	agctcagtea	ttgctgtcta	cctccagccc	780
aaaaatccgt	atgcccaagg	gaggggcaag	ttctttgggtc	tcttctatgc	agtgggcaact	840
ccttcactta	accctctcgt	atacaccctg	aggaacaagg	agataaaagcg	agcactcagg	900
aggttactag	ggaaggaaag	agactccagg	gaaagctgga	gagctgct		948

<210> 762

<211> 927

<212> DNA

<213> Unknown (H38g611 nucleotide)

<220>

<223> Synthetic construct

<400> 762

atgaaaagag	agaactttac	tctcatcact	gactttgttt	tccaaggttt	ctctagcttc	60
catgagcagc	agatcaccct	ttttggcggtg	ttccttgac	tatacatctt	aaccttagca	120
ggcaatatca	tcattgtgac	catcatccga	attgatcttc	atcttcacac	acccatgtac	180
ttcttctctg	gcattgctgc	cacttcagag	actgtatata	cattgggtcat	tctcccaaga	240
atgctctcca	gcctcgtagg	tatgagccag	cccattgtcat	tggcagggtg	tgccacacag	300
atgttctttt	ttgtaacctt	tggcatcact	aactgcttcc	tgctcacagc	aatgggatat	360
gaccgctatg	tggccatctg	caacccctcg	agatacatgg	ttattatgaa	caagaggctg	420
cgtatccaac	ttgtcctggg	ggcctgcagc	attgggctga	ttgtagcaat	aacgcaagtg	480
acatctgtat	tcaggttacc	cttctgtgct	agaaaggtgc	cccacttctt	ctgtgacatc	540

cgccctgtga	tgaagctctc	ctgcattgac	accactgtca	atgaaatcct	gacttttgatt	600
atcagtgtgc	tggtgcttgt	tgtacctatg	ggctctggtt	tcattttctta	tgttctcatt	660
atctctacaa	tcctcaagat	tgcttcagtt	gagggccgga	agaaggcttt	tgccacctgt	720
gcatccacc	tcactgtggt	cattgtccac	tacagctgtg	cctccattgc	ctacctcaag	780
cccaagtcag	agaacaccag	agaacatgac	cagctgatct	cggtgacct	caactgtcatc	840
actcccctac	tgaaccctgt	ggatacacc	ctgagaaata	aagaggtcaa	agatgctctg	900
tgcagggtg	ttggtgggaa	gttttcc				927

<210> 763

<211> 650

<212> DNA

<213> Unknown (H38g612 nucleotide)

<220>

<223> Synthetic construct

<400> 763

tgggctgaca	tcggtttcac	ctcggccacg	gctcccaaga	tgattgtgga	catgcagtcg	60
cataggagag	ccatctctca	tgcgggctgt	ctgacgcaga	tgtctttctt	gttcctttgt	120
gcatgtgtag	aaggcatgct	cctgactgtg	atggcctatg	actgctttgt	agacatctgt	180
cgccctctgc	actaccacgt	catcgggaat	cctcacttct	gtgtcttctt	cgtgggggtg	240
tcctttctcc	ttagcctgtg	ggattcccag	ctgcacagtt	ggattgtgtt	acaatatcac	300
catcttcaag	aatgtggaaa	tctctaattt	tgtctgtgac	ccctctcaac	ttctcaaact	360
tgcctgttct	gacggcggtca	tcaatagcat	attcatatat	tttgatagta	ctatgttttg	420
tttcttctcc	atttcaggga	tcctatgggt	ttactataaa	atcgtcccct	ccattctaag	480
gatttcacgt	tcagatggga	agtataaagc	cttctccacc	tgtgggtcct	caccagycag	540
ttgtttgctg	attttataga	acaggcattg	gcatgtacct	gacttcagct	gtgtcaccac	600
ccccaggaa	tggtgtgggtg	gcacattga	tatacgtctt	gtcactccc		650

<210> 764

<211> 641

<212> DNA

<213> Unknown (H38g613 nucleotide)

<220>

<223> Synthetic construct

<400> 764

ttcactgacc	tcttctttgt	caccaacaca	atccccaaga	tgctggtgaa	cctccagtc	60
cagaacaaag	ccatctccta	cacagggtgt	ctgacacagc	tctacttctt	ggtctccttg	120
gtggccctgg	acaacctcaa	cctggccgtg	atggcgtatg	atcgctatgt	ggccatctgc	180
cgccccctcc	actatgtcac	agccatgac	cctgggctct	gtatcttctt	cctctccttg	240
tggtgggtgt	tctctgccct	ctatggcctc	atccatatcc	tcctcatgac	cagggtgacct	300
tctgtgggtc	tcaaaagatc	cactacctct	tctgtgagat	gtacttcttg	ctaaggctgg	360
catgttccaa	catccacgtc	aaccacacag	tactggttgc	cacgggctgc	ttcatcttcc	420
tcacccctt	aggcttcatg	atcacatcca	acgcccgc	tgtagagcc	atcctccaaa	480
taccctcagc	cactgggaag	tacaaagcct	tctccacctg	tgcttcccat	ttggctgtgg	540
tctccctctt	ctatgggact	ctgggtatgg	tgtacctgca	gccccccaa	acctaactcca	600
tgaaggactc	agtagccaca	gtgatgcatg	cggtgggtgac	g		641

<210> 765

<211> 635

<212> DNA

<213> Unknown (H38g614 nucleotide)

<220>

<223> Synthetic construct

<400> 765

tttgttgatt	tctgttattc	caccacaatt	acacccaaac	tgctggagaa	cttgggtgtg	60
gaagatagaa	ctatctcctt	cacaggatgc	accatgcagt	tattctttgt	ctgcatattt	120

gtagtaacag	aaacattcat	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtgt	180
aacctctctc	tctacacagt	tgcaatgtac	cagaggcttt	gctccttggt	agtgggtaca	240
tcatactgtt	gggggatagt	ctgttcctcg	acacttacct	agtttctact	ggaattatcc	300
ttcagaggaa	ataatatcat	taataacttt	gtctgtgagc	acgctgccat	tgttgctgtg	360
tcttgctctg	acccctgtgt	gagccaggag	atcactttag	tttctgccac	attcagttaa	420
ataagcagcc	tgcttcctat	gctttcattt	ttatcactgt	catgaagacg	ccttccactg	480
gggggcgcaa	gaaagcgctc	tccacgtctg	cctcccactt	gacggccatt	accattttcc	540
atgggactat	ccttttcttc	tactgtgttc	ctaactccaa	aagttcgtgg	ctcatggtca	600
aggtggcctc	tgtctttttac	acagtgggtca	ttccc			635

<210> 766

<211> 635

<212> DNA

<213> Unknown (H38g615 nucleotide)

<220>

<223> Synthetic construct

<400> 766

ttagttgatt	tctgtttattc	caccacaatt	acacccaagc	tgctgaggaa	cttgggtgtg	60
gaagatagaa	ctatctcctt	cacaggatgc	accatgcagt	tattctttgt	ctgcataattt	120
gtagtaacag	aaacattcgt	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtgt	180
aacctctctc	tctacacagt	tgcaatgtac	cagaggcttt	gctccttggt	agtgggtaca	240
tcatactgtt	gggggatagt	ctgttcctcg	acacttacct	agtttctact	ggaattatcc	300
ttcagaggaa	ataatatcat	taataacttt	gtctgtgagc	acgctgccat	tgttgctgtg	360
tcttgctctg	acccctgtgt	gagccaggag	atcactttag	tttctgccac	attcaatgaa	420
ataagcagcc	tgcttcctat	gctttcattt	ttatcactgt	catgaggacg	ccttccactg	480
gggggcgcaa	gaaagcgctc	tccacgtctg	cctcccactt	gacggccatt	accattttcc	540
atgggactat	ccttttcttc	tactgtgttc	ctaactccaa	gagttcgtgg	ctcatggtca	600
aggtggcctc	tgtctttttac	acagtgggtca	ttccc			635

<210> 767

<211> 936

<212> DNA

<213> Unknown (H38g616 nucleotide)

<220>

<223> Synthetic construct

<400> 767

atgtccattt	ccaacatcac	agtctacatg	ccctctgtgt	tgacactagt	agggatccca	60
ggcctagaat	ctgtgcagtg	ctggattggg	attccattct	gtgccattta	tctcattgct	120
atgattggaa	attccttgct	tctgagcatc	atcaaatctg	agcgcagctc	ccatgagccc	180
ttgtacattt	tcttaggcat	gctaggagcc	acagacattg	cacttgctag	cagcattatg	240
ccaaagatgc	ttggaatatt	ctggtttaat	gtgcctgaaa	tctattttga	ttcctgcttg	300
cttcaaatgt	ggttcatcca	cacattgcag	ggtatagagt	caggcatcct	tgtggccatg	360
gccctggacc	gttatgtggc	catctgttat	ccactaagac	atgccaacat	cttcaccac	420
cagcttgcca	ttcagatagg	aactatggtc	gtactcaggg	ctgctattct	tgtagcccca	480
tgccatgtac	tgataaagtg	ccggtttcaa	ttttatcaca	caacagtcac	ctcccactcc	540
tactgtgagc	atatggccat	tgtgaaacta	gcagcagcaa	atgttcaagt	caacaaaatc	600
tatggtttgt	ttgtggcctt	cactgtagca	ggatttgacc	tcacattcat	cacattgtcc	660
tacatccaga	tatttatcac	agtttttcgt	ttgccccaga	aggaggctag	gtttaaagca	720
ttcaatacct	gcattgctca	catctgtgtc	ttcctccagt	tctacctcct	tgccctcttc	780
tccttcttca	cacatagggt	tgggtctcac	atccccctt	atatccatat	tctcttttct	840
agcattttact	tgtcgtgtccc	tccattttctc	aatccacttg	tctatggtgc	aaagaccaca	900
cagatttcga	ttcatgtggt	aaaaatgttc	tgttca			936

<210> 768

<211> 954

<212> DNA

<213> Unknown (H38g617 nucleotide)

<220>

<223> Synthetic construct

<400> 768

atgtggcaga	agaatcagac	ctctctggca	gacttcatcc	ttgaggggct	cttcgatgac	60
tcccttacct	accttttctt	tttctccttg	accatggtgg	tcttccttat	tgcggtgagt	120
ggcaacaccc	tcaccattct	cctcatctgc	attgatcccc	agcttcatac	accaatgtat	180
ttcctgctca	gccagctctc	cctcatggat	ctgatgcatg	tctccacaat	catcctgaag	240
atgggtacca	actacctatc	tggcaagaaa	tctatctcct	ttgtgggctg	tgcaacccag	300
cacttcctct	atttgtgtct	agggtggtgt	gaatgttttc	tcttagctgt	catgtcctat	360
gaccgctatg	ttgccatctg	tcattccactg	cgctatgctg	tgctcatgaa	caagaagggtg	420
ggactgatga	tggctgtcat	gtcatgggtg	ggggcatccg	tgaactccct	aattcacatg	480
gcatcttga	tgcacttccc	tttctgtggg	cctcggaag	tctaccactt	ctactgtgag	540
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cttcaaagtg	tcattcagat	gcgtcatctt	gggagcaaga	gaaatgcctt	tgccacttgt	720
ggctccaccc	tcacgggtgt	ttctcttttg	tttgggtgct	gcactcttct	ctacatgaga	780
cccagggtccc	agtgcactct	attgcagaac	aaagttggtt	ctgtgttcta	cagcatcatt	840
acgcccacat	tgaattctct	gatttatact	ctccggaata	aagatgtagc	taagggtctg	900
agaagagtgc	tgaggagaga	tgttatcacc	cagtgcattc	aacgactgca	attg	954

<210> 769

<211> 881

<212> DNA

<213> Unknown (H38g618 nucleotide)

<220>

<223> Synthetic construct

<400> 769

gccacgtaca	attccagcaa	tactgtggtg	acagagtttg	tgtttctgag	cttcccagag	60
ctgcaccatc	ttcaagggtc	gctatttggg	cactcctcat	catctatgtg	gtgaccatcc	120
tagaggacct	ggctgtcggtg	gggaccatca	gagccagcca	ccacctgcac	atatccacac	180
acctcttctt	ggcccaactc	tcggtgctgg	agactctgta	cacctcggtc	accgtcccaa	240
agctgttggc	cggactccca	gcacgagcga	cgaccatcta	tctccttctc	ggggcacctc	300
acctggctgc	tcctcttctt	ctcactcagc	tcctctgagt	gcgtcctccc	ggccaacatg	360
gactgtgact	ggcaccacgt	catctgccac	ctgctgcact	acccagccca	tcattggactc	420
catgcagctg	gctctgcctg	cacctggcca	tcagcgccca	gctcagcagc	ttcccagcct	480
cctttgtgtc	cacggctctc	aactccagcc	tgaggctccg	cagccccgat	gtcctcaacc	540
acttctgtga	tatcccaacc	ccgctagggc	tctcttgctc	cagcaccact	accatagaaa	600
tgcggtactca	ggcagcccag	gtgatccttg	cggtctccct	gcaggcaacc	acggtctcct	660
acaccacat	cctggccaga	tcgctgagga	ttccagaaag	gccagcagc	taaaggcctt	720
ccccacctat	gcctcccacc	tgggggtggc	gctcctctaa	cctcatcaag	ctggtgttca	780
gggtgtact	tggttgggat	ccctctgctc	aaacccatca	tctactgcct	gggaactgca	840
acatcaggga	ggccctggcc	aaactcctcc	aggcccttcc	c		881

<210> 770

<211> 880

<212> DNA

<213> Unknown (H38g619 nucleotide)

<220>

<223> Synthetic construct

<400> 770

gccacatata	attccagcaa	tactgtggtg	acagagtttg	tctttctgag	cttcccagag	60
ctgcgccatc	ttcaagggtc	gctatttggg	cactcctcat	catctatgtg	gtgaccatcc	120
tagaggacct	ggctgtcggtg	gggaccatca	gagccagcca	ccacctgcac	atatccacac	180
acctcttctt	ggccaaactc	tcggtgctgg	agacctgta	cacctcggtc	accgtcccaa	240
agctgttggc	cggactccca	gcacgagcga	cgaccatcta	tctccttctc	ggggcacctc	300

acctggctgc	tcctcttctc	ctcactcagc	tcctctgagt	gcacccctcc	ggccaacatg	360
gactgtgact	ggcaccggt	catctgccac	ctgctgact	accagccca	tcattggactc	420
catgcagctg	gctctgcctg	cacctggcca	tcagcgccca	gctcagcagc	ttcccagcct	480
cctttgtgtc	cacggctctc	aactccagcc	tgaggctccg	cagccccgat	gtcctcaacc	540
actttctgtg	tatcccaccc	ccgctagggc	tctcttgctc	cagcaccact	accatagaaa	600
tgcggactca	ggcagcccag	gtgatccctg	cggttccct	gcaggcaacc	acggtctcct	660
acacccacat	cctggccaga	tcgctgagga	ttccagaaag	gcccagcagc	taaaggcctt	720
ccccacctat	gcctcccacc	tggggtggcg	gctcctctaa	cctcatcaag	ctggtgtcag	780
gggtctactt	ggttgggatc	cctctgctca	aacctatcat	ctactgcctg	ggaactgcaa	840
catcagggag	gccctggcca	aactcctcca	ggccttccc			880

<210> 771

<211> 524

<212> DNA

<213> Unknown (H38g620 nucleotide)

<220>

<223> Synthetic construct

<400> 771

ctcctaattg	cagcagacaa	ccacacagcg	tagaggcggt	tgtcctgcag	ggtttctctg	60
aagaccttc	actccagggc	tgtctgtttg	cttttttctc	cctttacctg	atggcacttg	120
taggaaacat	cctcatggtc	atggccatca	gtctgaatcc	aggcctccac	acgccagtgt	180
acttctttct	caccaacctg	gcccttttag	acatcgtctg	cacatccatg	gacaaagca	240
gagtgggtgc	tgtgctgtac	acagtggtea	gccccaccct	gaaccctca	cctactccct	300
gcggaacaag	gacttatcag	tagcactgag	gagagtgttt	tcttgcatca	ggtaaaagga	360
aggggaagttt	ctagtgtgaa	atgttccagg	tgtaacaaa	ctaatttcaa	catatgactt	420
tgagaatctc	atgcaagcag	caaggaacaa	gaaagtaatt	aatgccacat	atttataaat	480
aatgtgctcc	cgcacggggc	tgccatcatt	caatgtggaa	ctcc		524

<210> 772

<211> 951

<212> DNA

<213> Unknown (H38g621 nucleotide)

<220>

<223> Synthetic construct

<400> 772

atggaaagga	ccaacgattc	cacgtcgaca	gaatttttcc	tggtagggct	ttctgcccac	60
ccaagctcc	agacagtttt	cttcgttcta	attttgtgga	tgtacctgat	gacctgtctt	120
ggaaatggag	tccttatctc	agttatcatc	tttgattctc	acctgcacac	ccccatgtat	180
ttcttctctc	gtaatctttc	cttcctcgac	gtttgctaca	caagttcctc	tgtcccacta	240
attcttgcca	gctttctggc	agtaaagaaa	aaggtttccct	tctctgggtg	tatggtgcaa	300
atgtttattt	cttttgccat	ggggggccacg	gagtgcata	tcttaggcac	gatggcactg	360
gaccgctatg	tggccatctg	ctacccactg	agataccctg	tcacatgag	caagggtgcc	420
tatgtggcca	tggcagctgg	gtcctgggtc	actgggcttg	tggactcagt	agtgcagaca	480
gcttttgcaa	tgcagttacc	attctgtgct	aataatgtca	ttaaaccattt	tgtctgtgaa	540
attctggcta	tcttgaaact	ggcctgtgct	gatatttcaa	tcaatgtgat	tagtatgaca	600
gggtcgaatc	tgattgttct	ggttattcca	ttgttagtaa	ttccatctc	ttacatattt	660
attgttgcca	ctattctgag	gattccttcc	actgaaggaa	aacataaggc	cttctccacc	720
tgctcagccc	acctgacagt	ggtgattata	ttctatggaa	ccatcttctt	catgtacgca	780
aagcctgagt	ctaaagcctc	tgttgattca	ggtaatgaag	acatcattga	ggccctcatc	840
tcccttttct	atggagtgat	gactcccatg	cttaatcctc	tcacatcatag	tctgcgaaac	900
aaggatgtaa	aggctgctgt	caaaaacata	ctgtgtagga	aaaacttttc	t	951

<210> 773

<211> 954

<212> DNA

<213> Unknown (H38g622 nucleotide)

<220>

<223> Synthetic construct

<400> 773

atggaatggg	aaaaccaaac	cattctggtg	gaattttttc	tgaagggaca	ttctgttcac	60
ccaaggcttg	agttactctt	ttttgtgcta	atcttcataa	tgtatgtggt	catccttctg	120
gggaatggta	ctctcatttt	aatcagcctc	ttggaccctc	accttcacac	ccctatgtac	180
ttctttcttg	ggaacctctc	cttcttggac	atctgctaca	ccaccacctc	tattccctcc	240
acactagtga	gcttcctttc	agaaagaaag	accatttcct	tttctggctg	tgcagtgcag	300
atgttccttg	gcttggccat	ggggacaaca	gagtgtgtgc	ttctgggcat	gatggccttt	360
gaccgctatg	tggctatctg	caaccctctg	agatatccca	tcatcatgag	caagaatgcc	420
tatgtaccga	tggctgttgg	gtcctgggtt	gcagggattg	tcaactctgc	agtacaaact	480
acatttgtag	tacaattgcc	tttctgcagg	aagaatgtca	tcaatcattt	ctcatgtgaa	540
attctagctg	tcatgaagtt	ggcctgtgct	gacatctcag	gcaatgagtt	cctcatgctt	600
gtggccacaa	tattgttcac	attgatgcca	ctgctcttga	tagttatctc	ttactcatta	660
atcattttcca	gcatectcaa	gattcactcc	tctgagggga	gaagcaaagc	tttctctacc	720
tgctcagccc	atctgactgt	ggtcataata	ttctatggga	ccatcctctt	catgtatatg	780
aagcccaagt	ctaaagagac	acttaattca	gatgacttgg	atgctaccga	caaaattata	840
tccatgttct	atgggggtgat	gactcccatg	atgaatcctt	taatctacag	tcttagaaac	900
aaggatgtga	aagaggcagt	aaaacaccta	ccgaacagaa	ggttctttag	caag	954

<210> 774

<211> 369

<212> DNA

<213> Unknown (H38g623 nucleotide)

<220>

<223> Synthetic construct

<400> 774

ttcctccttt	aggccaacta	cagcgagag	gagcgctttc	tcctgctggg	tttctccgac	60
tggccttccc	tgcagccggt	cctcttegcc	cttgtcctcc	tgtgctacct	cctgaccttg	120
acgggcaact	cggcgctggt	gctgctggcg	ggcgagcccg	cgctgcaca	cgcccatgta	180
ctacttctct	tccacctggc	cttggtagac	gcgggcttca	ctactagcgt	ggtgccgccc	240
ctgctggcca	acctggcgga	ccagcgctct	cgtgcgcgca	gccactgcac	ggcccagctg	300
tgcgcctcgc	tggctctggg	ttccgcccga	tgcgtccatc	tggcggtgat	ggctctgggc	360
cgcgcggtc						369

<210> 775

<211> 945

<212> DNA

<213> Unknown (H38g624 nucleotide)

<220>

<223> Synthetic construct

<400> 775

atgagacaga	ataacaatat	tacagaattt	gtcctcctgg	gctttttctc	ggatcctggt	60
gtgcaaaaag	cattattttg	catgttttta	ctcacatact	tgggtgacagt	ggtggggaac	120
ctgctcattg	tgggtggatat	tattgccagc	ccttccttgg	gttccccaat	gtattttctc	180
cttgccctgcc	tgtcatttat	agatgctgca	tattccacta	ccattttctcc	caagttaatt	240
gtaggcttat	tctgtgataa	aaagactatt	tccttccaag	ggtgcatggg	ccagctattt	300
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cttctgttgg	tgggtggccat	gattggaggt	tttgtacatt	ctgcgtttca	aattgttgtg	480
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ttacttggaac	tggcatgcac	tgacacctac	tttataggcc	tcactgttgt	tgtcaatagt	600
ggagcaatct	gtatgggtcat	tttcaacctt	ctgttaatct	cctatggagt	catcctaagc	660
tcccttaaaa	cttacagtca	ggaaaagagg	ggtaaagcct	tgtctacctg	cagctccggc	720
agtaccgttg	ttgtcctctt	ttttgtaccc	tgtattttca	tatatgttag	acctgtttca	780
aactttccta	ctgataagtt	catgactgtg	ttttatacca	ttatcacaca	catgctgagt	840

cctttaatat atacgttgag aaattcagag atgagaaatg ctatagaaaa actcttgggt 900
 aaaaagttaa ctatatattat tataggagga gtgtccgtcc tcatg 945

<210> 776

<211> 352

<212> DNA

<213> Unknown (H38g625 nucleotide)

<220>

<223> Synthetic construct

<400> 776

cgctgtgctgc cccgcctgct ggaccacttc atctgtgagc tgccggcggt gctcaagctg 60
 gcctgcggag ggcagggaga cactaccgag aaccagatgt tcgccgcccg cgtgggtcatc 120
 ctgctgtctgc cgtttgccgt catcctggcc tcctacgggt ccgtggcccc agactgtctg 180
 ttgcatgcgg ttcagcggag gccggcagag aggcgggtggg cacgtgtggg tcccacctga 240
 cagccgtctg cctgttctac ggctcggcca tctacaccta cctgcagccc gcgcagcata 300
 caaccaggca cggggcaagt tcgtatcgct cttctacacc gtgggtcacac ct 352

<210> 777

<211> 937

<212> DNA

<213> Unknown (H38g626 nucleotide)

<220>

<223> Synthetic construct

<400> 777

ggactgagta ataattgttac agaatttgtc ctcttgggca acactcagtg tcctgatgtg 60
 caaaatgcat tatttgtcat ggttttactc acatacgttg tgagtatggc gggaaacttg 120
 ctgtctgtgg tggctattat ttccagccct tcctttggct ccccaatgta cttcttcctc 180
 acagcctggt atttatataat gctgcatatt ccaataccat ttctcccaaa ttgattatag 240
 gcttactcca tgataaaaaag actattttct tcacagcatg catggggcag ctatttatag 300
 accacttatt tgggtggtgct gaggtcttcc tacttgtggg gatgtcctac gatttctatg 360
 tggccatctc taagccactg cactatttga ccatcatgaa tcaacagggt tgtatccttc 420
 tgttgggtgg ggctgtgact ggaggttttg tgagttgtgt gtttcaaatt gttgttgtgt 480
 acactctctc gttctgtggc caaatgtcac tgaccacttt gtctgtgaca tgtaccatt 540
 attggaactg gtttgactat atacctactt tataggtctc actgttggtg ccaatgggtc 600
 agcaatctgt atggtcgtct tcaccttct actaatctcc tatggagtca tcctaaacaa 660
 ctttaaaact tatagtcagg aaggaggct taaagccctg tctgcctgca tctcctacat 720
 aacagtcact gtcctgtttc ttgttccctg tattttcctt ttcggttagac ctgtttcgaa 780
 ctttcttatt gataaattca tgactgtgtt ttatacagtt atcatacaca tgttgaatcc 840
 attaatatac acactgagaa atttagagat gagaattgct gtaaaatcca atgtaaaaaa 900
 actctggcat taaaaactta actatagtta gaatgag 937

<210> 778

<211> 970

<212> DNA

<213> Unknown (H38g627 nucleotide)

<220>

<223> Synthetic construct

<400> 778

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 ctgcccattg tgggtgactat tattgccacc cccaccttag gctccccagt gtacttcttc 180
 attgtctgct tgtcatttat agatgttgtg tattccacca ccattcctcc caaattgatt 240
 gtaagctatc tccatgataa aaagactatt tccttccgag cttgcatggg tcagcccttt 300
 tatagaccac ttagttgggt gtgctgaggg cttcattctg ttgggtgatgg cctataatcg 360
 ctatgtagcc atctgtaagc cactgcacta tttcaccatc atgaattgac aggtttgcat 420

ccttctgttg	gtggtggctg	tactgcggg	tttgtgcat	tctgtgtttc	aaatthtagt	480
tgcgtacagt	ctccttttct	gtggtcccaa	tatcattgac	cactttttct	gtgacatgta	540
cccattattg	gaactggcac	acactgacac	ctactttata	ggcctcactg	ttgttgccaa	600
tgggtggagga	atctgtatgg	tcttgttcat	ccttctacta	atctcctgtg	gggtcactct	660
aatctccctt	aaaacttata	gtcaggaagg	gaggcataaa	gccctgtcta	cctgcagctc	720
ccacattacc	gtggttgccc	tggtttttgt	tccctgtatt	ttcctgtatg	ttagacctgt	780
ttcaaacctt	cctattaata	aattcattac	tgtgttttat	acagttatca	cacccatggt	840
gaatccatta	atatacacat	tgagaaactg	agagatgaaa	aatgctatag	gaaacctctg	900
gtgtaaatat	taactctaga	tagaataaga	gggtacattt	tcatgtaggt	acagggtaat	960
gcaggtaaag						970

<210> 779

<211> 704

<212> DNA

<213> Unknown (H38g628 nucleotide)

<220>

<223> Synthetic construct

<400> 779

cccatgtact	tggtcctcgg	caatttgtcc	ttcattgac	tctgttattc	atttgtcttt	60
acccccaaaa	tgctgatgag	ctttatttca	gagaggaaca	tcctctcctt	tccaggatgc	120
ataactcagc	tcttttttct	ctgctttttt	gtccactctg	agtgtctatg	gctgacagcc	180
atggcctatg	atcgtctatg	ggccatctgc	aaaccccttc	tgtacatggg	caccacgtcc	240
ctcagatctg	ttctctactg	atgcttggtt	catatgtgat	ggggtttgct	ggggccatgg	300
tccacacaga	gtgtatgatg	aagctcatct	tttgtgactc	caacgtcatc	aaccataaca	360
tgtgtgacat	cttcccactg	ctccagctct	cctgcagcag	cacctaggcc	aatgagctgg	420
tgtgtctctg	tattgtaggc	acagttgtta	tagtatcaag	cctcattatc	ttaatctctt	480
atgctttgat	tcttttcaat	atccttcaca	tgtcctcagc	cgagggttgg	ttcaaagcca	540
tcggtacctg	tggtctccac	ataataactg	ttggcctatt	ctatgaattt	gggctgatca	600
ctcatgttaa	gttatcatct	gattgggtata	tgggtcaggg	gaagtctctc	tcagtgtttt	660
atacaaatgt	ggttcccacg	ctgaacccct	tcctctactg	tctg		704

<210> 780

<211> 924

<212> DNA

<213> Unknown (H38g629 nucleotide)

<220>

<223> Synthetic construct

<400> 780

atgaggcaga	ataacaatat	tacagaattt	gtcctcctcg	gcttctctca	gtatcctgat	60
gtgcaaatg	cattatttgt	catgttttta	ctcatatata	ttgtgactat	gggtgggaac	120
ctgctcattg	tggtgtctat	tattgccagt	cccttttttg	gctccccagt	gtacttcttc	180
cttgctgcc	tgctatttat	agatgctgtg	tattccacca	ccatttctcc	tgatttgatt	240
gtagacttac	tctgtgataa	aaagactatt	tccttcccag	cttgcatggg	tcagctattt	300
atagagcact	tggttggtga	tactgacgtc	ttccttctgg	tggtgatggc	ctatgatcgc	360
tacgtggcca	cctgtaagcc	actgcgctat	ttgaccatca	tgaattgaca	ggtttgcatc	420
cttctgttgg	tggtggctgt	gactggaggt	tttctgcatt	ctgtgtttca	aatttttagtt	480
gtgtacagtc	tcccttttctg	tggccccaat	gtcatttatc	actttttctg	taacatatac	540
cctttattgg	acctggaatg	cactgacacc	tacttcgtag	gcctcgctgt	ggttttcaat	600
gggtggagcaa	tctgtatggg	catcttcacc	cttctactaa	tctcctatgg	gggtatccta	660
aactccctta	aaacttatag	tccggaaggg	aggcataaag	ctccgtttat	ctgcagctcc	720
cactttatca	tggttatctt	gttttttggg	ccctgtattt	tcttatatgt	tagaccggtt	780
tcaaaccttc	ctattgataa	attcctgact	gtgtttttat	cagttatcac	acccaagtgt	840
aatcctttta	tatacatgtt	gagaaattca	gagatgagaa	atgctataga	aaatctcttg	900
ggataccaaa	gtgggaagac	agga				924

<210> 781

<211> 690

<212> DNA

<213> Unknown (H38g630 nucleotide)

<220>

<223> Synthetic construct

<400> 781

cccatgtact	tgttctctgc	caacttgctc	ttgcctgaca	tgggtttcac	ctccagcatg	60
gtccccaaga	tgattgtgga	catctaattc	cacagcagac	tcatctccta	ggcaggctgc	120
ctgactccca	tgtctctctt	tgccattttt	ggaggcatgg	aagagagaca	tgctcctgag	180
tgtgatccct	atgaccggtt	tgtagccatc	tgtcaccctc	tatatcattc	agccatcatg	240
aaccggtgtt	tctgtggctt	tctagttttg	ttgtcttttt	tttctcagtc	tcttttagac	300
gcccagggtg	acaacttgat	tgccctacaa	atgacctgct	tcaaggatgt	ggaaattcct	360
aatttcttct	gggaaccttc	tcaactcccc	catcttgcat	gttgcgacac	cttcaccaat	420
aacataatca	tgtattcccc	tgctgccata	tttgggtttt	ttcccatctc	ggggaccctt	480
ttctcttact	ataagattgt	ttcctccatt	cggagggttt	catcatcagg	tggaagtat	540
aaggcctgct	ccacctgtgg	gtctcacctg	tcagttgttt	gctgatttta	tggaacaggc	600
ttttgggggt	acctcagttc	agatgtgtca	tcttccccgg	gaaaggctgc	agtggcctca	660
gtgatgtaca	cgggtggtcac	ccccatgctg				690

<210> 782

<211> 681

<212> DNA

<213> Unknown (H38g632 nucleotide)

<220>

<223> Synthetic construct

<400> 782

tctttctctg	agattggctt	caacctagtc	attgtgccca	aaatgctggg	gaccctgctt	60
gcccaggaca	caaccatctc	cttccttggc	tgtgccactc	agatgtattt	cttcttcttc	120
tttggggtag	ctgaatgctt	cctcctggct	accatggcat	atgaccgcta	tgtggccatc	180
tgcagtcctt	tgcactacct	agtcacatg	aaccaaagga	cacggggcaa	actggctgct	240
gcttcttggg	tcccaggctt	tctgttagct	actgtgcaga	ccacatggct	cttcagtttt	300
ccattctgtg	gcaccaacaa	ggtgaaccac	ttcttctgtg	acagcccggc	tgtgtgaag	360
ctggctctgt	cagacacagc	actgtttgag	atctacgcca	tcgtcggaac	cattctgggt	420
gtcatgatcc	cctgcttgc	gatcttgtgt	tcctatactc	gcattgctgc	tgctatcttc	480
aagatcccat	cagctaaagg	gaagcataaa	gccttctcta	cgtgctcctc	acacctcctt	540
gttgctcttc	ttttctatat	atcattaagc	ctcacgtact	tccggcctaa	atcaaataat	600
tcacctgagg	gcaagaagct	gctatcattg	tcgtacactg	ttatgactcc	catgctgaac	660
ccctttcctc	tactgtcctg	g				681

<210> 783

<211> 576

<212> DNA

<213> Unknown (H38g633 nucleotide)

<220>

<223> Synthetic construct

<400> 783

atggtcacag	agttctctct	actgggattt	ctcctggggc	caaggattca	gatgctcctc	60
tttgggctct	tctccctggt	ctatgtcttc	accctgctgg	ggaatgggac	catcctgggg	120
ctcatctcac	tggactccag	actccacacc	cccatgtact	tcttctcttc	acacctggcg	180
gtcgtcgaca	tcgcctacgc	ctgcaacacg	gtgcccggga	tgctggtgaa	cctcctgcat	240
ccagccaagc	ccatctcctt	tgcgggccgc	atgatgcaga	cctttctggt	ttccactttt	300
gctgtcacag	aatgtctcct	cctgggtggg	atgtcctatg	atctgtacgt	ggccatctgc	360
cacccccctc	gatatttcat	catcatgacc	tggaagtctc	gcatactctc	ggccatcact	420
tcttggaacat	gtggtccctt	cctggctatg	gtccatgtga	gcctcactct	aagactgcc	480
ttttgtgggc	ctcgtgaaat	caaccactty	ytctgtgaaa	tcctkkctgt	cctcaggctg	540
ggctgtgctg	atacctggct	caaccagggtg	gtcate			576

<210> 784
 <211> 924
 <212> DNA
 <213> Unknown (H38g634 nucleotide)

<220>
 <223> Synthetic construct

<400> 784
 tatgcagacc cacagaatct aacagatgtc tcwatattcc tcstcctaga actctcagag 60
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 ctgggggaac tgctcatcat cctggccatc agccctgact cccacctcca ccccccatg 180
 tactttcttc tctccaacct gtccttgccg gacatcggtt tcacctccac cagggtcccc 240
 aagatgattg tggacatcca gtctcacagc agagtcattc cctatgcagg ctgcctgact 300
 cagatgtctc tctttgccat ttttgaggc atggaagaga gacatgctcc tgagtgtgat 360
 ggcctatgac tggttttagg ccatctgtca cccgctatat cattcaccat catgaaccgg 420
 tgtttctgtg cctttctagt tttgttgtct tttttttct cagtctttta gactcccagc 480
 tgcacaactt gattgcctta caagtgcctt gcttcaagga tgtggaaatt cctaatttct 540
 tctgtgacct ttctcaactc ccccatcttg catgttgtga caccctcacc aataacataa 600
 tcatgtattt cctgtctgcc atatttggtt ttcttcccat ctccggggacc cttttctctt 660
 actataaaat tgtttctctc attctgaggg ttctcatcag aggtgggaag tataaagcct 720
 tctccacctg tgggtctcac ctgtcagttg tttgctgatt ttatggaaga ggtgttggag 780
 ggtacctcag ttcagatgtg tcatcttccc ccagaaaggg tgcagtggcc tgcagtgatg 840
 tacacgggtg tcaacctcat gctcaacccc tttatctaca gcctgagaaa cagggatatt 900
 aaaagtgtct tgcggcgggc gcaa 924

<210> 785
 <211> 714
 <212> DNA
 <213> Unknown (H38g635 nucleotide)

<220>
 <223> Synthetic construct

<400> 785
 atgtacttgt tcttgaggaa tctgtccttg cctgacatcg gtttcacctc caccattgtc 60
 cccaagatga ttgtggacat ccagttctac agcagagtga tctcctatgc aggccgcctg 120
 actcagatgt ctctctttgc cttttttgga ggcattggaag acaacatgct cctgagtgtg 180
 atggcctatg accggtttgt agccatctgt caccctctat atcattcagc catcatgaat 240
 ccgtgtttct gtggcttctt actttttgtt tctttttttt tttttctcag tcttttagac 300
 acccagctgc acaacttgat tgctttacaa atgacctgct tcaaggatgt ggaaattcct 360
 aatttcttct gtgaccttc tcaactcccc catcttgcag gttgtgacac cttcaccaat 420
 aacatcatcg tgtatttccc tgcgtgcata tttgttttcc ttcccatctc ggggacctt 480
 ttctctttta aactgtttgt ttcttccatt ctgagggttt catcatcagg cggaagtat 540
 aaaaccttct ccacctgtgg gtctcacctg tcagttattt gcttatttta tggaacagg 600
 gttggagggt acctcagttc agatgtgtca tcttccctga gaaaggctgc agtggcctca 660
 gtgatgtaca agatgggtcac ccccatgctg aaccttca tttacacctc gcgg 714

<210> 786
 <211> 962
 <212> DNA
 <213> Unknown (H38g636 nucleotide)

<220>
 <223> Synthetic construct

<400> 786
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 gaggcagaac attatgtgga tatccatccc cttctgcctg atatacacca tcatctttcc 120
 gggaaatggc atcattcttc acatcatccg aattgactct tccttgacc aacctatgta 180

ctatTTTTctg	gccatgccgg	cctttgttga	acttgggtgc	tctgcttcca	ccatgcccac	240
tgtgttaagc	atattcctct	ttggcattaa	cgatgtcagt	tttgggtggt	gcctgctcca	300
gatgttttct	atgcactctt	tcactcttat	ggagtcagggt	gtccttctgg	caatgtcagt	360
ggaccgcttt	gtggccatct	acagcccaact	gcgctacaca	accattctga	caattgcctg	420
catttctggg	atgggtgccg	ccattgcctt	gcgcagtgt	atgcttatgc	tcccactgct	480
ctttctctcg	aggcgtctgc	ctttctgtgg	ccacaatacc	ctcacacact	cttattgcct	540
ccactcagat	ctgatcaaat	tgccctgtgg	agacacacgc	cccaatagca	tcctggctct	600
atttgtcatt	accttcacat	ttggactgga	cttattgttc	attgtgggtt	cttatgtgct	660
gattcttcat	acagtactgg	aaatagcttc	tggagcaggg	cgtggcaggg	actcaacaca	720
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tcttctttcc	tcctgtgggt	aaccccattg	tctatagtat	caaaatcaaa	gaaattcgca	900
acagcgttgt	tcttacacta	tccaggaaga	ggggtgagtt	ctaattggaga	ccgaagatac	960
cc						962

<210> 787

<211> 872

<212> DNA

<213> Unknown (H38g637 nucleotide)

<220>

<223> Synthetic construct

<400> 787

acctcagagg	atccagaacg	gcagctgggc	cttgctggac	tgttcctgtc	catgtgcctg	60
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cctccatgta	cttcttcctc	tccaacctgt	ccttgccctga	catcggtttc	acctccacca	180
cggcccccca	gatgactgtg	gacatccagt	ctcgcagcag	agtcactctc	tatgcagggt	240
gcctgactca	gaagtctctc	tttgccattt	ttggaggcac	ggaagagaga	catgtctcctg	300
agtgtgatgg	cctatgaccg	gtttgttagcc	atctgtcacc	ctctatatca	ttcagccatc	360
atgaacctgt	gtttctgtgg	cttcctagtt	ttgctgtctt	ttttttttct	cagtctttta	420
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gtgttggagg	gtacctcagt	tcagatgtgt	catcttcccc	cagaaagggt	gcagtggctg	780
cagtgatgta	cacgggtggt	acctccatgc	tcaacccctt	tatctacagc	ctgggaaaca	840
gggatattaa	aagtgtcttg	cggcgggccgc	aa			872

<210> 788

<211> 646

<212> DNA

<213> Unknown (H38g638 nucleotide)

<220>

<223> Synthetic construct

<400> 788

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ggagacaagg	tcatctctta	caatgcatgt	gctgctcaaa	tgttcttttt	tgcagccttt	120
gccactgtgg	aaaatttctt	cttggcctca	atggcctatg	accgctatga	tgcagtgtgc	180
aaacccctac	attacaccac	caccatgaca	acaagtgtgt	gtgcatgtct	ggctataatc	240
tgttatgtct	gtggtttctt	gaatgcctcc	atacacattg	gggaaacatt	gtctctcttt	300
ctgtatgtcc	aatgaagtcc	attgcttttt	ctgtgatgtt	ccaccagtca	tggctctgtc	360
ttgtgtgat	agacatgtga	atgagctagt	tctcatttat	gtagccagtt	tcaatatctt	420
ttctgccatc	ctagtatatc	tgatctccta	cctattcata	tttatcacca	tcctaaagat	480
gcactcagct	tcaggatacc	agaaggcttt	gtccacctgt	gcctcccacc	tcaactgcagt	540
catcatcttc	tatgggacta	ttatcttcat	gtacttacag	cccagctctg	gtcactccat	600
ggacacagac	aaactggcat	ctgtgttcta	tactatgatc	atcccc		646

<210> 789
 <211> 648
 <212> DNA
 <213> Unknown (H38g639 nucleotide)

<220>
 <223> Synthetic construct

<400> 789
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 gagactcaga ccatctcctt ctgtggctgt ctcacacaga tgtatttcgt tttcatgttc 120
 gtggacacgg acaatttcct cctagctgtg atggcctatg accactttgt cgccgtgtgc 180
 cacccttac attacacagc aaagatgacc catcagctct gtgccctgct gggtgtgtgga 240
 ttatgggtgg ttgccaacct gaatgtcctt ctgcacaccc tgctgatggc tccactctca 300
 ttctgtgcag acaatgccat cactcacttc ttctgcatg tgactccct actgaaactc 360
 tcctgtcag acacacacct caatgaggtc ataatcctta gtgaggggtgc cctgggtcatg 420
 atcaccatc tctcttgcaa cctggcgtct tatatgcaca tcacctgcac tggcctgaag 480
 ggcccatcca caaaggggaag gtggaaagcc ttctccacct gtggctctca cctggctgtg 540
 ggtctcctct tctacagcac catcactgct gtgtatttta accctctgtc ctcccactca 600
 gctgcgaaag acactatggc tactgtgttg tatacagtag tgactccc 648

<210> 790
 <211> 471
 <212> DNA
 <213> Unknown (H38g640 nucleotide)

<220>
 <223> Synthetic construct

<400> 790
 atctgcagcc ccttgtctgta caatgtcatc atgtcctatc accactgctt ctggctcaca 60
 gtgggagttt acatttttagg catccttgga tctacaattc acaccggctt tatgttgaga 120
 ctctttttgt gcaagactaa tgtgattaac cattattttt gtgatctctt ccctctcttg 180
 gggctctcct gctccagcac ctacatcaat gaattactgg ttctggctctt gagtgcattt 240
 aacatcctga cgctgcctt aaccatcctt gcttcttaca tctttatcat tgccagcatc 300
 ctccgcattc gctccactga gggcagggtc aaagccttca gcacttgag ctcccacatc 360
 ttggctgttg ctgggttctt tgggtctgca gcattcatgt acctgcagcc atcatctgtc 420
 agctccatgg accaggggaa agtgtcctct gtgttttata ctattgttgt g 471

<210> 791
 <211> 975
 <212> DNA
 <213> Unknown (H38g641 nucleotide)

<220>
 <223> Synthetic construct

<400> 791
 atgaagactt tgtgttcctt tcttcagatc agcagaaata tgcatacaaga aaaccaaac 60
 accatcactg aattcattct cctgggactc tccaaccagg ctgaacatca aaacctcctc 120
 tttgtgcttt tcctgagtat gtatgtgggc actgtggttg ggaacgggct catcattgtg 180
 gctatcagct tggatatata ccttcacacc ccatgtatc tcttccttgc ctacctatcc 240
 tttgctgata tttcctccat ttccaactca gtcccaaaa tgctgggtgaa tattcaaacc 300
 aacagccaat ccatctctta tgagagctgc atcacacaga tgtacttttc tattgtgttt 360
 gtgtcactg acaatttgct tttggggacc atggccttcg accactttgt ggcgatctgc 420
 caccctctga actatacaac tttcatgcgg gccagggttcg gcactttgct cacagtcac 480
 tcgtgggttc tcagtaatat tattgtctct acacacaccc ttctgtcat tcaattgtct 540
 ttctgtgacc acaacactct cccacacttc ttctgtgact tggccctct gctcaaactg 600
 tcctgttcag atacaatgat caatgagctt gtgtgtgtta ttgtgggttt atcagttatc 660
 atcttccct ttgtactcat cttcttctcc tatgtctgca tcatcagagc tgtcctggga 720
 gtatcatcca cacagggaaa gtggaaagcc ttctccactt tggtgctctca cctgacaatt 780

gcattactgt	tctacggaac	cactgtaggc	gtgtactttt	tcccctcctc	cactcacccct	840
gaggacactg	ataagattgg	tgctgtccta	ttcactgtgg	tgacacccat	gatgaacccc	900
ttcatctaca	gcttgaggaa	taaggatatg	aaagggtgcc	tgagaaagct	catcaataga	960
aaaatttctt	ccctt					975

<210> 792

<211> 943

<212> DNA

<213> Unknown (H38g642 nucleotide)

<220>

<223> Synthetic construct

<400> 792

atgagaccta	ataacagcat	tacagaat	gtcctcctgg	gattctctca	ggatcctgggt	60
atgcaaaaag	aattattt	catgtttt	ttcacatacg	ttgtgactgt	gttggggaac	120
cagctcattg	tggtgactat	cattgccagc	ccttccttgg	gctccccaat	gtacttcttc	180
cttgccctgcc	tgctatttat	agatgctgca	tatttcaactg	tcatttctcc	caaattgatt	240
gtggacttac	tctgtgataa	aaagactatt	tccctccaaa	cgttcatggg	ccaactattt	300
atagaccact	tctttgggtg	tgagaggcc	ttccttctgg	tggtgatggc	ctatgatcgc	360
tatgttgcca	tctgtaagac	attgcactat	ttgaccatca	tgactcgaca	ggtttgatc	420
cttgccattgc	tggtggctgc	gacaggcggt	tttgtgcatt	ctgtgtttca	aattgttggt	480
gtgtacagtc	tccctttctg	tgccgccaat	gtcattgatc	atttcagttg	tgacatgtat	540
ccattatttg	aactggcatg	aactgacacc	tactttatag	gcctcactgt	tgttttcagt	600
ggtggagcac	tctgtatgg	catcttcacc	cttctaataa	tttcctatag	ggtcaccta	660
aactccctta	aaacttacac	tcagggaagg	agcataaagc	cctgtctacc	tgagctccc	720
acatcactgt	gattgtttct	tttttatctc	ctgtatttcc	atatatgtga	gacctgtttc	780
aaacttttct	attgacacat	tcatgactgt	cttttataca	gttatcacac	ccaagttgaa	840
tcctttaata	tacactttca	gaaattcaga	gatgagaaat	gttatagaaa	aactcctgggt	900
gaaaaaggta	actatatatta	gaataacagg	gtccatcctc	atg		943

<210> 793

<211> 942

<212> DNA

<213> Unknown (H38g643 nucleotide)

<220>

<223> Synthetic construct

<400> 793

atgagacaga	ataaaaaataa	tacagaat	gtcctcctgg	gcttctctca	ggatcctgat	60
gtgcaaatgc	attattt	atgtttt	tactcacataat	gtgacaacag	tggggaacct	120
gctcattgtg	gtgactatta	ttgccagccc	ttccttgggc	tccccagtgt	atttctgact	180
tgccctgtctg	tcatgtatag	atgctgcata	ttccactacc	atttctccca	aactgattgt	240
agagttactc	attgataaaa	agactatttc	cttccgagct	tgcatgggcc	agctatttat	300
agaacacttg	tttgggtggt	ctgagatcct	cattctgatg	atgatggcct	gtgatcgcta	360
tggtggacatc	tgtaagccac	tgactatttt	gaccatcatg	aattgacagg	tttgcatcct	420
tctgttgggtg	ttggctgtga	caggaggttt	tgtacattct	atgtttcaaa	ctgttgttgt	480
gtacaatctc	cctttctctg	gccccaatgt	cattgacatt	gaccactttg	tctgtgacat	540
gtacccatta	ttggaactgg	cgttcactga	tacctacttt	ataggcctca	ctgttgttgt	600
caatgggtgga	gcaatgtgta	tggtcatcct	caccattcta	ctaatacct	acggaatcat	660
cctaaactct	cctaaaaact	atagtcagga	agggaggtgt	aaagccctgt	ctacctgcag	720
ccccacata	accgtgggtg	tectcttttt	tgttccctgt	attttcatat	atgttagacc	780
tgtttcaacc	tttcctattg	ataaattcat	gactgtgttt	tatacagtta	tcacacccat	840
gttgaatcct	ttaatatata	cgttgagaaa	ttcagagatg	agaaactcta	tagaaaatct	900
cttgtgtaaa	aaagctatct	gtagttagaa	taagagtgtc	cc		942

<210> 794

<211> 945

<212> DNA

<213> Unknown (H38g644 nucleotide)

<220>

<223> Synthetic construct

<400> 794

gagtaaatga	gacagaataa	cagtagtaca	gaatttggtc	tcctgggctt	ttctcaggat	60
cctgatgtgc	aaaatgcgct	atttgctatg	tttttactga	catacattgt	gacaatgggtg	120
gggaacctac	tcattgtggt	gactattatt	gccagccctt	ccttgggctc	cccaatgtac	180
tttttccttg	cccacctgtc	atttatagat	gctgtgtatt	ccaccaccat	ttctcctgta	240
ttgattgtag	acttactctg	tgacaaaaag	acgatttcc	tctgagcttg	catgggacaa	300
ctgtttatag	accacttatt	tggtgggttct	gagggtcttc	ttctgggtgg	gatggcctgt	360
gategctgtg	tggtccatctg	taagccactg	cactatttga	ccatcatgaa	tcgacagggt	420
tgcatctctc	tcttgggtgt	ggctgtgact	ggagggtttg	tgcatcctgt	atttcaagtt	480
gttgttgtgt	acagttctcc	tttctgtggc	cccaatgtca	ttgaccactt	tttctgtgac	540
atataccctt	tatttgggaa	tggtcatgcac	tgacacctac	tttataggcc	tcactgtgggt	600
tttcaatggg	ggagcaatgc	gtatgggtcat	cctcaccctt	ctactagtct	tctatggagt	660
catcctaaac	tcccttaaaa	cttacagtca	ggaagggagg	cataaagccc	tgtctacctg	720
cagctcccat	gttaccgtgg	ttatcttgtt	ttttgcttcc	tgtattttca	tatatgttag	780
acctgttttc	aattttctgt	tgataaattc	atgactgtgt	tttatacggg	tatcacacc	840
atgttgaatc	cttttatatg	catgttgaga	aattcagaga	tgagaaatgc	tatagaaaaa	900
ctcctgtgta	aaatgaactg	tagttagaat	aagagtgttc	cttcc		945

<210> 795

<211> 939

<212> DNA

<213> Unknown (H38g645 nucleotide)

<220>

<223> Synthetic construct

<400> 795

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gtgcaaatg	cattatattgt	catgttttta	ctaacataca	ttgtgactat	gggtggggaac	120
ctgctcattg	tggtgactat	tattgccacc	ccatccttgg	gctccccaat	gtactttttc	180
cttgctgccc	tgctatttat	agatgctgtg	tattccacca	ccatttatcc	caaattgggt	240
gtagactaac	tccataatta	aaagactatt	ttgttcccaa	cttgcatggg	ccagccactt	300
acagaccact	tatttggtgg	tggtgaggtc	tttttttctg	ttgggtgatg	cctgtgatcg	360
ctatgtggcc	atctgtgaag	cactgcacta	ttttaccatc	atgaatcgac	agggttttcat	420
ccttctgttg	gtagtggctg	tgactggagt	tttgtgcgtt	ctgtgttcca	aattgttgtt	480
gtgtacagtc	tccctttctg	tggtcccaat	gtcattgacc	actttttctg	taacatgtac	540
ccattaatgg	aaatggcatg	aactgacacc	tactttatag	gcctcactgt	ggttttcaag	600
gttgaagcaa	tctgtgtggt	catcttcacc	cttctactaa	tctcctctgg	cgctatccta	660
atctccctta	aaacttacag	tcaggaaggg	aggcataaag	ccctgtttac	ctgcagctcc	720
cgcattactg	tagttgtcct	cttttttgtt	ccctgtatatt	tcatgtatgt	tagacctgtt	780
tttaacttcc	ccattgataa	atttattatt	gtgttttata	cagttatcac	acccatgctg	840
aatcctttta	tatacatgtt	gagaaattca	tagacgagaa	atgctataga	aaacccttag	900
tgtaaaaaat	taactgtaga	tagaataaga	gtgtacatc			939

<210> 796

<211> 945

<212> DNA

<213> Unknown (H38g646 nucleotide)

<220>

<223> Synthetic construct

<400> 796

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atgcaaaaca	cattatattgt	catgttttta	ctcacataca	ttgtgacagt	gggtggggaac	120
ctactcgttg	cggtgactat	tattgtcagc	ccttccttga	gctccccaat	gtaattcttc	180
cttgcttgcc	tgctattaat	agatgctgta	ttatccacca	ccatttctcc	catattgatt	240

gtagacctac	tctgtgacaa	aaagactatt	tccttcccag	cttgcattggg	ccagctatatt	300
acagaccact	tgtttggtgg	aactgagatc	ttccttcttg	tggatgatggc	ctatgatcgc	360
tacgtggcca	tctgtaagcc	actgcactat	ttaaccatca	tgaatcgaca	ggtttccatc	420
cttctgttgg	tgggtggccat	gactggaggt	ttccttcatt	ctgtgtttca	aattgctggt	480
ctgtacagtc	tccttttctg	tggccccaat	gtcattgacc	actttttctg	tgacatgtac	540
ccattattgg	aactggcgtg	cactgacacc	tactctatag	gcctcactgt	agttttcagt	600
gggtggagcaa	tgtgtatggg	catcttcgcc	cttctactaa	tctcctatgg	agtcagccta	660
aactccctta	aaacttatag	tcaggaaggg	aggcgtaaag	ccctgtctac	ctgcagctcg	720
cacatcaccg	tgggtgtcct	cttttttgtt	ccctgtatatt	tcatgtatgt	tagacctgtc	780
tcaaacttcc	ctattgataa	attcgttact	gtgttttata	cagttatcac	acccatgctg	840
aatccttttt	tatacacgtt	gagaaattca	gagatgataa	atgctataaa	acacctgttg	900
tgtaagaagc	taactatagt	tagaataaga	gtgtccctcc	tcatg		945

<210> 797

<211> 967

<212> DNA

<213> Unknown (H38g647 nucleotide)

<220>

<223> Synthetic construct

<400> 797

atgggatcta	gtaacaatgt	tacagaattt	gtcctcctgg	ccctcactca	ggctcctgat	60
gtgcaaaaag	tattatttgt	aatgttttta	ttcacatata	ttgtgactat	gggtgggcaac	120
ctgctcactg	tggtgaccat	ttttgccctc	cctcttttgg	ctccccagtg	taactcttcc	180
ttgcctgcct	gtcattgatg	gatgccgtat	attccacttc	attttctcct	aaactgatga	240
tagacttact	ctgcgataaa	aaagactggt	tccttcccgg	cttgcattggg	ccagctatatt	300
gcggaaccacc	tatttgggtgg	tgttgagggtc	tttcttttctg	tggggatggc	ctatgatcac	360
tatgtggcca	tctctaagcc	actgcactat	ttgatcatcg	tgaatcgact	ggtttgcatc	420
cttctgttgg	tgggtggcgt	gactggagga	ttttgaattc	tatgtttctt	tttttttaaa	480
tttattttatt	tttttatgtg	aattctatgt	ttcaaattgt	cgttgtgtac	agtctccctt	540
tctgtggctc	caatgtcatt	gaccacattg	tctgtgacat	gtaccatta	ctggaactgg	600
catgcgctga	cacctacttt	atagggctca	ctgtgattgc	caatgggtgga	gcaatctgta	660
tggatcatctt	ctgccttcta	ctaacctcct	atggagtcac	cctaaaacttc	cttaaaaactt	720
atagtcaaga	aggaggagcat	agaaccctgt	ctacctgcag	ctcccacatt	actgtgggtg	780
tcctcttttt	tgttccctgt	attttcatgt	atgttagacc	tgtttcaaac	ttccctattg	840
ataaattcat	tactgagttt	tatacagtta	tcacccccaa	gttgaatcca	ttaatccaac	900
cactgagaaa	ttgagaaatg	agaattacta	tgaagaaact	ctgggtgttaa	acctgaacta	960
tagttag						967

<210> 798

<211> 930

<212> DNA

<213> Unknown (H38g648 nucleotide)

<220>

<223> Synthetic construct

<400> 798

atgaaaaata	agaacaatgt	gactgaattt	atcctcttag	ggctcacaca	gaaccctgag	60
gggcaaaaag	ttttatttgt	cacattctta	ctaactctaca	tgggtgacgat	aatgggcaac	120
ctgcttatca	tagtgaccat	catggccagc	cagtccctgg	gttcccccat	gtactttttt	180
ctggcttctt	tatcattcat	agataccgtc	tattctactg	catttgctcc	caaaatgatt	240
gttgacttgc	tctctgagaa	aaagaccatt	tcctttcagg	gttgatggc	tcaacttttt	300
atggatcatt	tatttgcctg	tgctgaagtc	attcttcttg	tggtaatggc	ctatgatcga	360
tacatggcca	tctgtaagcc	tcttcatgaa	ttgatcacca	tgaatcgctg	agtctgtgtt	420
cttatgctgt	tggcggcctg	gattggaggc	tttcttcaat	cattgggtca	atttctcttt	480
atttatcagc	tccctttctg	tggacccaat	gtcattgaca	acttctctgt	tgatttgtat	540
cccttattga	aacttgcttg	caccaatacc	tatgtcactg	ggctttctat	gatagctaata	600
ggaggagcga	tttgtgctgt	caccttcttc	actatcctgc	tttctctatg	ggatcatatta	660
cactctctta	agactcagag	tttgggaagg	aaacgaaaag	ctttctacac	ctgtgcatcc	720

cacgtcactg	tggtcatttt	attctttgtc	ccctgtatct	tcttgatgc	aaggcccaat	780
tctacttttc	ccattgataa	atccatgact	gtagtcttaa	cttttataac	tcccatgctg	840
aaccactaa	tctataccct	gaagaatgca	gaaatgaaaa	gtgccatgag	gaaacttttg	900
agtaaaaaag	taagcttagc	tgggaaatgg				930

<210> 799

<211> 825

<212> DNA

<213> Unknown (H38g649 nucleotide)

<220>

<223> Synthetic construct

<400> 799

atggtgggaa	acctcctcat	ttgggtgact	actattggca	gccccctcct	gggtcccta	60
atgtacttct	tccttgccca	cttgctactt	atggatgcca	tatattccac	tgccatgtca	120
cccaaattga	tgatagactt	actctgtgat	aaaatcgcta	tttccttgct	agcttgcatg	180
ggtcagctct	tcatagaaca	cttacttggg	ggtgcagagg	tcttcctttt	ggtggtgatg	240
gcctatgatc	gctatgtggc	tatctctaag	ccgctgcaat	atttgaacat	catgaatcga	300
ctgggttgca	tccttctggt	ggtggtggcc	atgattggag	gttttgtgca	ctctgtggtt	360
caaattgtct	ttctgtacag	tctaccaatc	tgtggcccca	atgttattga	ccactctgtc	420
tgtgacatgt	accattgttt	ggaactgttg	tgccttgaca	cctactttat	aggactcaat	480
gtggttgcca	atggtggaat	aatttgtatg	gtcatcttta	cctttctgct	aatctcctgt	540
ggagtcaccc	taaacttctt	taaaacttac	agtcaggaag	agaggcataa	agccctgcct	600
acctgcacat	cccacatcat	tgtggttgcc	ctcggttttg	ttccctgtat	ttttatgtat	660
gtagaccccg	tttccaactt	tccttttgat	aaattaatga	ctgtgtttta	ttcaattatc	720
acactcatgt	tgaatccttt	aataatactg	ttgagacaat	cagagatgaa	aaatgctatg	780
aaaaatctct	ggtgtgaaaa	gttaagtata	gttagaaaaa	gagta		825

<210> 800

<211> 654

<212> DNA

<213> Unknown (H38g650 nucleotide)

<220>

<223> Synthetic construct

<400> 800

ttgcctgaca	tcgggtttcac	ctccaccacg	gtccccaaga	tgatttgtga	catccagtct	60
cacagcagac	tcattctccta	ggcaggctgc	ctgactccca	tgtctctctt	tgccatcttt	120
ggaggcatgg	aagagagaca	tgctcctgag	tgtgatccct	atgaccggtt	tgtagccatc	180
tgtcaccctc	tatatcatte	agccatcatg	aaccggtgtt	tctgtggctt	tctagttttg	240
ttgtcttttt	tttctcagtc	tcttttagac	gccaggtgc	acaacttgat	tgccctacaa	300
atgacctgct	tcaaggatgt	ggaaattcct	aatttcttct	gggaaccttc	tcaactcccc	360
catcttgcat	gttgcgacac	cttcaccaat	aacataatca	tgtattcccc	tgctgccata	420
tttgggtttt	ttcccatctc	ggggaccctt	ttctcttact	ataagattgt	ttcctccatt	480
ctgaggggtt	cttcacacag	tgggaagtat	aaagccctct	ccacctgtgg	gtctcgccctg	540
tcagttgttt	gctgagttta	tggaaacagg	gttggagagt	acctcggttc	agatgtgtca	600
tcttccccga	gaaaggggtc	agtggcctca	gtgatgtaca	cgggtggcac	cccc	654

<210> 801

<211> 648

<212> DNA

<213> Unknown (H38g651 nucleotide)

<220>

<223> Synthetic construct

<400> 801

tcaatggccc	tcattgctcat	ctgcaccacc	ggaccaaga	ggccttcaac	tacctgtctg	60
gcagcaagtc	ccatttctat	ggctgtgtgt	ccacacaaat	tttcttctat	acatcactgc	120

ttggctctga	gtgctttctt	ttggctgtta	tggttatga	ccgctacact	gccatttgcc	180
accctctaag	atacaccaat	ctcatgagcc	ctaaaatttg	tggaacttatg	actgcctttt	240
cctggatcct	gggctctacg	gatggaattt	ttgatgttgt	agcaacattt	tccttctcct	300
actgtgggtc	tcgggaaata	gccacttct	tctgtgactt	ccccctccct	actaatcctc	360
tcattgcagt	acacatcaat	atttgaaaag	attcttttca	tctgctgtat	agtaatgatt	420
gttttccctg	ttgcaatcat	cattgcttcc	tatgctcgag	ttatcctggc	tgctattcac	480
atgggatctg	gagagggtcg	tcgcaaagct	tttactactt	gttccctctca	cctcttggtg	540
gtgggaatgt	actatggagc	agctttgttc	atgtacatac	ggcccacatc	tgatcgctcc	600
ccaacacagg	acaagatggg	gtctgtattc	tacaccatcc	tcactccc		648

<210> 802

<211> 635

<212> DNA

<213> Unknown (H38g652 nucleotide)

<220>

<223> Synthetic construct

<400> 802

tttgtggaca	ttgcctgttc	ctcagccaca	gcacccaaga	tgattgaaga	ctttgtttct	60
gagaaaaaga	ctatttccta	ctggggctgt	ataactcaga	tgtttacctt	ccactttttt	120
ggttgtgctg	agatttttgt	tttgactgtc	atggcttttg	atcgctatgc	tgctatctgc	180
caacccctcc	gttacactgt	catcatgagt	gctaattgctt	atactgtgct	ggcatcactg	240
tcctggttgg	gggccctggg	tcattccttt	gttcagaccc	tcctgacctt	ccagctgccc	300
ttctgtaatg	ctcagggttat	agaacattac	ttttgtgatg	tccaccaggt	cctaaaactt	360
gcctgtgctg	atacaactct	ggtaaatatg	ttgggtggtg	ccaacagtgg	tctcatctcc	420
ctgggggtgtt	tcctcattct	tttgccctcc	tacacagtca	ttctgttttag	tcttcaaaaa	480
cagtctgcag	agagctgaca	caaagttctc	tctacctgtg	gatctcatct	gactatagta	540
actttcttct	ttgttccgtg	tatctttatt	tatctccatc	cactactttc	ccattggata	600
aagctgtgtc	tgtgttctat	accaccatca	ccccca			635

<210> 803

<211> 670

<212> DNA

<213> Unknown (H38g653 nucleotide)

<220>

<223> Synthetic construct

<400> 803

ttgcctgaca	tcggtttcac	ctccacacgg	tccccaagat	gattgtggac	atccagtctc	60
acagcagagt	catctcctat	gcaggctgcc	tgactcagat	gtctctcttt	gccatttttt	120
gaggcagggg	agagagacat	gtcctgagt	gtgatggcct	acgaccagtt	tgtagccatc	180
tgtcaccctc	catatcggtc	agccatcttg	aaccogtggt	tctgtggctt	cctagatttg	240
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accttctcaa	ctcccccatc	ttgcatgttg	tgacatcttc	accaggaaca	tcaacctgta	420
tttccctgct	gccatatttg	gttttcttcc	catctcgggg	acctttttct	cttactctaa	480
aattgtttcc	tccattctga	gggtttcatc	gtcagggtggg	aggtataaag	ccctctccac	540
ctgtgggtct	cacgtgtcag	ttgtttgctg	agtttatgga	acaggcggtg	gagggtacct	600
cagttcggat	gtgtcatatt	ccccagaaa	gggtgcagtg	gcctcagtga	tgtacgcggg	660
tgtcaccccc						670

<210> 804

<211> 648

<212> DNA

<213> Unknown (H38g654 nucleotide)

<220>

<223> Synthetic construct

<400> 804
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 ggggctactg aatatcttct cctggccgctc atgtcctttg ataggtttgt agctatttgt 180
 cggectctcc attactcagt tatcatgcac cagagactct gcctccagtt ggcagctgca 240
 tccagggtta ctgggttttag taactcagtg tgggtgtcta ccctgactct ccagctgcca 300
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 tcttgtgttg agacaacagc aaatgaggct gaactattcc ttgtcagtga gctcttccat 420
 ctaatacccc tgacactcat ccttatatca tatgtcttta ttgtccgagc agtattgagg 480
 atacagtctg ctgaagggtcg acaaaaagca tttgggacat gtgggtccca tctaatgtg 540
 gtgtctcttt ttaatagtag agccgtctct gtgtacctgc aaccaccttc gccagctcc 600
 aaggaccaag gaaagatggt ttctctcttc tatggaatca ttgcaccc 648

<210> 805

<211> 655

<212> DNA

<213> Unknown (H38g655 nucleotide)

<220>

<223> Synthetic construct

<400> 805
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 ggaggcatgg aagacagaca tgctcctgag tgtgatggcc tatgaccggt tcttagccat 180
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 aatgacctgc ttcaaggatg tggaaaattc taattttctt tgtgaccctt ctcaactccc 360
 ccactcttgca tgttgtgaca ccttcaccaa taacataatc atgtattttc ctgctgccat 420
 atttggtttt ctcccatct cggggaccct tttctcttac gataaaattg tttcctccat 480
 tctgagggtt tcatcatcag gtgggaagta taaagcctt tccacctatg ggtctcacct 540
 gtcagatgtt tcttgatttt atggaacagg cgttggaggg tacctcagtt cagatgtgtc 600
 atcttccccg agaaaagactg cagtggcctc agtgatgtac acagtgggtca cccc 655

<210> 806

<211> 662

<212> DNA

<213> Unknown (H38g656 nucleotide)

<220>

<223> Synthetic construct

<400> 806
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 ggagacacgg aagagagaca tgttcctgag tgtggtggcc tatgaccggt ttgtagccat 180
 ctgtcacccc ctatatcgtt cagccatctt aaacccctgt ttctgtggct tcttagattc 240
 gttgtccttg gttttttttt ttttctcagt ctttttagact ccagctgca caacttgatt 300
 gccttataaa tgacctgctt caaggatgtg gaaattccta atttcttctg ggaaccttct 360
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 gctgccatat ttgggtttct tcccatctcg gggacgcttt tctcttgcta taaaattggt 480
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 ctcatctgtc agttgtttac tgattttatg gaacaggctt tggagggtac ctgagttcag 600
 atgtgtcacc ttccccgaga aagactgcag tggcctcagt gatgtacgca gtgggtcacc 660
 cc 662

<210> 807

<211> 647

<212> DNA

<213> Unknown (H38g657 nucleotide)

<220>

<223> Synthetic construct

<400> 807

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cacaagtcca	caatttccta	tgacgcctgc	ctctcccagc	tcttcttctt	ccaccttctg	120
gctgggatgg	actgcttcct	gtgacggcc	atggcctatg	accgactcct	ggccatctgc	180
cagcccctca	cctacagcac	ccgcatgagt	cagacagtcc	agaggatgtt	ggtaggtgcg	240
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ttctgtggcc	caaatgaggt	caatcacttc	tactgtgacc	tcccacagct	cttccagctc	360
tcctgtctta	gcacccaact	caatgagctg	ctgctctttg	tagcagcagc	cttcattggc	420
gtggcaccct	tggtcttcat	cagtgtgccc	tatgcccattg	tggtagctgc	tgtgctgcaa	480
atcgctccgc	tgagggcaga	aagaaggcct	tctccacatg	tggtccccc	ctcactgtgg	540
tgggcatctt	ctatgggaca	ggtgtcttca	gctacatgag	gctgggttca	gtggaatctt	600
cagacaagga	taaggggggtt	ggggttttca	tgactgtgat	caacccc		647

<210> 808

<211> 635

<212> DNA

<213> Unknown (H38g658 nucleotide)

<220>

<223> Synthetic construct

<400> 808

tttgtggaca	tagcctgttc	ctcagccaca	gcacccaaga	tgattgaaga	ctttgtttct	60
gagaaaaaga	ctatttccta	ctggggctgt	ataactcaga	tgtttacctt	ccactttttt	120
ggttgtgctg	acatttttgt	tttgactgtc	atggcttttg	atcgctgtgc	tgctatctgc	180
caacccctcc	gttacactgt	catcatgagt	gctaattgctt	atactgtgct	ggcatcactg	240
tcctggtttg	gggccctggg	tcatttcctt	gttcagacc	tcctgacctt	ccagctgccc	300
ttctgtaatg	ctcaggttat	agaccattac	ttttgtgatg	tccacccagt	cctaaaactt	360
gcctgtgctg	atacaactct	ggtaaatatg	ttggtggttg	ccaacagtgg	tctcatctcc	420
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cagtctgcag	agagctgaca	caaagttctc	tctacctgtg	gatctcatct	gactatagta	540
actttcttct	ttgttccgtg	tatctttatt	tatctccatc	cactactttc	ccattggata	600
aagctgtgtc	tgtgttctat	accaccatca	cccca			635

<210> 809

<211> 648

<212> DNA

<213> Unknown (H38g659 nucleotide)

<220>

<223> Synthetic construct

<400> 809

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caggacccat	ccatccccta	tgccggactgc	ctgacccaaa	tgtacttctt	cctgttatctt	120
ggagacctgg	agagcttctc	ccttgtggcc	atggcctatg	accgctatgt	ggccatctgc	180
ttccccctgc	actacaccgc	catcatgagc	cccatgctct	gtctcgccct	ggtagcgctg	240
tcctgggtgc	tgaccacctt	ccatgccatg	ttacacactt	tactcatggc	caggttgtgt	300
ttttgtgcag	acaatgtgat	ccccactttt	ttctgtgata	tgtctgctct	gctgaagctg	360
gccttctctg	acactcgagt	taatgaatgg	gtgatattta	tcatgggagg	gctcattctt	420
gtcatcccat	tcctactcat	ccttgggtcc	tatgcaagag	ttgtctcttc	catcctcaag	480
gtcccttctt	ctaagggtat	ctgcaaggcc	ttctctactt	gtggctccca	cctgtctgtg	540
gtgtcactgt	tctatgggaa	cgttattggg	ctctacttat	gctcatcagc	taatagtctt	600
actctaaagg	acactgtcat	ggctatgatg	tacactgtgg	tgaccccc		648

<210> 810

<211> 438

<212> DNA

<213> Unknown (H38g660 nucleotide)

<220>

<223> Synthetic construct

<400> 810

actttgcaga	atatcacctc	cacttccatc	attttccctgc	tcactgggtgt	tccctgggctg	60
gaagccttcc	acacctggat	ctccattccc	ttctgcttcc	tctctgtaac	tgctctcttg	120
ggaaacagcc	tgatcctctt	cgctaccatc	actcagccca	gcctccacga	accaatgtac	180
tatttccctc	ccatgctgtc	cgccactgac	ctcggcctgt	ccatatccac	tctgggtcacc	240
atgctgagta	tattctgggt	caatgtgagg	gaaatcagct	ttaatgcctg	cttgtccccc	300
atgttcttta	ttaaattctt	cactgtcatg	gaatcctcag	tgctgttggc	catggctttt	360
gacggtttgg	tgccgtctct	atccccttag	tatgccatga	tttaactgac	tcagatagct	420
aaaatgagtg	cagtgtat					438

<210> 811

<211> 1002

<212> DNA

<213> Unknown (H38g661 nucleotide)

<220>

<223> Synthetic construct

<400> 811

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gatcgtcccc	acctagagct	gatcgtcttt	gtggttgctc	tcactcttta	tctgctgact	120
cttcttggca	acatgaccat	tgtcttgctt	tcagctctgg	attcccggct	gcacacacca	180
atgtatttct	ttttggcaaa	cctctcattc	ctggacatgt	gtttcaccac	agggtccatc	240
cctcagatgc	tctacaacct	ttgggggtcca	gataagacca	tcagctatgt	gggttggtgcc	300
atccagctgt	actttgtcct	ggccctggga	ggggtggagt	gtgtcctcct	ggctgtcatg	360
gcatatgacc	gctatgctgc	agtctgcaaa	cccctgcaat	acaccatcat	catgcaccca	420
cgtctctgtg	gacagctggc	ttcagtgcca	tggctgagt	gctttggcaa	ttctctcata	480
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gcttttgccc	tggcaatctt	tatcactcct	gcaccactca	tcctcattct	catttcttat	660
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aacacttgca	gctcgcact	aattgttgct	tctctcttct	atggtacaat	catatacatg	780
tacctccagc	cagcaaatac	ttatccccag	gaccagggca	agtttcttac	ccttttctac	840
acaattgtca	ctcccagtg	taacccccct	atctatacac	taagaaacaa	agatgttaaa	900
gaggccatga	agaaggtgct	aggggaaggg	agtgcagaaa	tatagtaagg	ggtgattaaa	960
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<210> 812

<211> 827

<212> DNA

<213> Unknown (H38g662 nucleotide)

<220>

<223> Synthetic construct

<400> 812

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ctggcaggga	cagacctcat	ggtgacattg	accacgatgc	ctactgtaat	gggcatccta	120
tgggtgaatc	acaggggaag	ttagcagtgt	gggctgcttc	ctacaggctt	actttattca	180
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catccgcaat	cctttgagat	atgctctcca	tttccaccaa	tactagagtc	atagcgtag	300
gagtgggatt	gttccctaagg	ggtttgggtat	ccatcctgcc	tgtaattttg	cgtctttttc	360
catttccata	tggcaaatct	catgttatca	cacgttgctt	tctgcctcca	ccaagaaatc	420
atgagactgg	cttgtgctga	cataacttcc	aataaacttt	accctgtaat	tttgatctct	480
ttaacaatct	ccctaaactc	tctgatcacc	ccctcctcct	atataccta	ccttaatact	540
gtcataggga	ttgcctctgg	tgaaaaaaaa	ccaaagccct	caatacctgt	atctcccaca	600

taagttgtgt	ccttatctcc	tatgttacgg	tgatggggtt	gacattcatt	tacaaatttg	660
ggaagaatgt	gccaaagggt	gtccacatta	tcataagtta	catctacttc	ctctttcccc	720
ctttaatgaa	ccctgtcatc	tacagcatca	aaaccaagca	aatacaatat	ggcattatcc	780
gccttttata	taaacatagg	tttagtaggt	aaactcggat	ctggaaa		827

<210> 813

<211> 657

<212> DNA

<213> Unknown (H38g663 nucleotide)

<220>

<223> Synthetic construct

<400> 813

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cacagcagag	tcattctcta	tgcaggctgc	ctgactcaga	tgtctctctt	tgctgttttt	120
ggaggcatgg	aagaaagaca	tgctcctgag	tgtgagggcc	tatgaccggt	ttgtagccat	180
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gttgtctttt	tttttttttt	ttctcagtct	ttcagactcc	cagctgcaca	acttgattgc	300
cttacaaatg	acctgcttca	aggatgtgga	aattcctaata	ttcttctggg	aaccttctca	360
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attctgaggg	tttcatcatc	aggtgggaag	cataaggcct	tctccaccag	ggggtctcac	540
ctgtcagttg	tttgctgatt	ttatggaaca	ggcattggag	gtacactcag	ttcagatgtg	600
tcattctccc	cgagaaaggc	tgcatgtggc	tcagtgatgt	acacggtggc	catcccc	657

<210> 814

<211> 655

<212> DNA

<213> Unknown (H38g664 nucleotide)

<220>

<223> Synthetic construct

<400> 814

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cacagcagag	tcattctcta	tgcaggctgc	ctgactcaga	tgtctctctt	tgccattttt	120
ggaggcatgg	aagagacaca	tgctcctgaa	tgtgatggcc	tatgtccggt	ttgtagccat	180
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aatgacctgc	atcaaggatg	tggaaattcc	taattttctt	tgtgaccctt	ctcaactccc	360
acaccttgcg	tggttgtgaca	ccttcaccaa	taacatagtc	atgtatttcc	ttgctgccat	420
atttgggttt	cttctatct	cacggatcat	tttctcttac	tataaaattg	tttctcccat	480
gctgagtggt	tcattcatcag	gtgggaagta	taaagccttc	tccatctgtg	ggctctccct	540
gtcagttgtt	tgcttatttt	atggaaaagt	cggtgggggg	tacctgagtt	cagatgtgtc	600
atcttcccc	agaaaggggtg	cagtggcctc	aatgatgtac	acggtgatca	cccc	655

<210> 815

<211> 646

<212> DNA

<213> Unknown (H38g665 nucleotide)

<220>

<223> Synthetic construct

<400> 815

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ggagacaagg	tcattctctta	caatgcatgt	gctgctcaaa	tgctcttttt	tgccagcttt	120
gccactgtgg	aaaatttcc	cttggcctcg	atggcctatg	accgcatga	tgcatgtgtc	180
aaacccttac	attacaccac	caccatgaca	acaagtgtgt	gtgcatgtct	ggctataatc	240
tggtatgtct	gtggttctct	gaatgcctcc	atacacattg	gggaaacatt	gtctctcttt	300

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ttctgccatc ctagtatatc tgatctccta cctattcata tttatcacca tcctaaggac 480
gcactcggtc tcaggatacc agaaggcttt gtccacctgt gcctcccacc tcaactgcagt 540
catcatcttc tatgggacta ttatctccat gtacttacag cccagctctg gtcactccat 600
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<210> 816

<211> 649

<212> DNA

<213> Unknown (H38g666 nucleotide)

<220>

<223> Synthetic construct

<400> 816

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ttgcctgaca tcggttttcac ctccaccatg gtccccaaga tgattgtgga atccaatctc 60
acagcagagt catctectac gcaggctgcc tgactcagat gtctctcttt gccatttttg 120
gaggcatgga agagagacat gctcctgagt gtgatggcct atgaccggtt tgtagccatc 180
tgtcaccctc tatatcatc agccatcatg aaccctgtgt tctgtggctt cctagttttg 240
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ttgctgagtt tatggaacag gcgttggagg ttacctcagt tcagatgatg tgcatcttc 600
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```

<210> 817

<211> 651

<212> DNA

<213> Unknown (H38g667 nucleotide)

<220>

<223> Synthetic construct

<400> 817

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aacaagagaa aaacaatctc ctttgtccca tgcacaatgc agaccttttt atacatggct 120
tttgctcaca ctgagtgtct catcttggta atgatgtcct acgatcggta catggctatc 180
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<210> 818

<211> 646

<212> DNA

<213> Unknown (H38g668 nucleotide)

<220>

<223> Synthetic construct

<400> 818

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ggagacgagg tcatctctta cagtgcattg gctgctcaaa tgttcttttt tgcagccttt 120
gccactgtgg aaaatttcct cttggcctca atggcctatg accgctatga tgcagtgtgc 180

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aaacccctac	attacaccac	caccatgaca	acaagtgtgt	gtgcatgtct	ggctataatc	240
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ctgaatgtcc	aatgaagtcc	attgcatttt	ctgtgatgtt	ccaccagtca	tggtctgtgc	360
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gcactcagct	tcaggatacc	agaaggcttt	gtccaactgt	gcctcccacc	tcactgcagt	540
catcatcttc	tatgggacta	ttatcttcat	gtacttacag	cccagctctg	gtcactccat	600
ggacacagac	aaactggcat	ctgtgttcta	tactatgata	atcccc		646

<210> 819

<211> 933

<212> DNA

<213> Unknown (H38g669 nucleotide)

<220>

<223> Synthetic construct

<400> 819

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gggaacctgg	gcttgataac	cctgataagg	ctcaactctc	acttgacac	ccctatgtac	180
ttcttctctt	ataacttgte	cttcatagat	ttctgctatt	ccagtgttat	cactcccaaa	240
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gttggtgtgg	gcattgatat	tggtgtgccc	acagtcacca	tcttcatttc	ctatgctctc	660
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tgcagctccc	acataattgc	agtttctctg	ttctttgggt	caggagcatt	catgtacctc	780
aaaccctttt	ctcttttagc	tatgaaccag	ggcaagggtg	cttccctatt	ctataccact	840
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<210> 820

<211> 927

<212> DNA

<213> Unknown (H38g670 nucleotide)

<220>

<223> Synthetic construct

<400> 820

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ggcaacttgg	gcttgatcac	cttaattggg	ataaatccta	gccttcacac	ccccatgtac	180
tttttctctt	tcaacttgte	ctttatagat	ctctgttatt	cctgtgtgtt	tacccccaaa	240
atgctgaatg	actttgtttc	agaaagtatc	atctcttatg	tgggatgtat	gactcagcta	300
tttttcttct	gtttctttgt	caattctgag	tgctatgtgt	tggtatcaat	ggcctatgat	360
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agcatgctgc	gactgacctt	ctgtgattcc	aacgtcattg	accattatct	gtgtgacgtt	540
ctccccctct	tgcagctctc	ctgcaccagc	acccatgtca	gtgagctggt	atttttcatt	600
gttggttgag	taatcaccat	gctatccagc	ataagcatcg	tcactcttta	cgctttgata	660
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ggcaaaaccc	tgaagagagt	gctcttc				927

<210> 821
 <211> 887
 <212> DNA
 <213> Unknown (H38g671 nucleotide)

<220>
 <223> Synthetic construct

<400> 821
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 acaaactccc gctgccccag tgttttattc ttaatgtggt ccctgtgggg agaatttgaa 120
 cataatttta tgtccctaaa ttctcacctt cataccacca cacacttttt cctcttcacg 180
 ctatccttca ttgatgtctg ctattcattt gtctgtacca caaaaattcc aatgggcttt 240
 atctcagaga ggaacatcat ctccctttgtg ggatggccaa cgtagctata tttcttttgc 300
 atctttgtca aagaacctaa aaatggggtc attgtgggaa taatgttctc agccaagatg 360
 cttgtagccg agagataatg gactagtcgt tgatgtgaaa ctagaaaatg cacatggccc 420
 tagaaaaggtc tgattttaga atgggataaa caggatctgc tacaagaaa catttaatca 480
 tattcttgta ttacagcgat tatttccaga gatagtgagg ctgcagagct ttgggacaag 540
 gttccttagc gaagcaagac acactctcta gaattgcaca tgtactttaa aaagtctgtt 600
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 atcatagaaa atggatcttt acaaaatctt catgttttgt gggttactca caagaaaaat 720
 tttctccgct catttctact tctcaaattg ttcaaggaaa aatgtctcct aaaggatata 780
 tctgattctg gagaatgagc ttacctatgt gtgcaatttt tatctttgtc agaagatact 840
 actaccttct gaaaaagttg aaaacactgc tttataagaa cagctat 887

<210> 822
 <211> 939
 <212> DNA
 <213> Unknown (H38g672 nucleotide)

<220>
 <223> Synthetic construct

<400> 822
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 ccagagttcc ggcaaccctt ctttttctctg tttctagtgg tctacattgt caccatggta 120
 ggcaaccttg gcttgatcat tcttttcggt ctaaattctc acctccacac accaatgtac 180
 tatttctctt tcaatctctc cttcattgat ctctgttact cctctgtttt cactcccaa 240
 atgctaataa actttgtatc aaaaaagaat attatctcct atgttgggtg catgactcag 300
 ctgtttttct ttctcttttt tgtcatctct gaattgtaca tgttgacctc aatggcatat 360
 gatcgctatg tggccatctg taatccattg ctgtataagg tcaccatgtc ccatcaggtc 420
 tgttctatgc tcaacttttg tgcttacata atgggattgg ctggagccac ggcccacacc 480
 ggggtgcatg ttagactcac cttctgcagt gctaatatca tcaaccatta cttgtgtgac 540
 ataactcccc tcttccagct ttctgcacc agcacctatg tcaacgaggt ggttgttctc 600
 attgttgtgg gtattaatat catggtaccc agttgtacca tctctatttc ttatgttttc 660
 attgtcacta gcattcttca tatcaaatcc actcaaggaa gatcaaaagc cttcagtact 720
 tgtagctctc atgtcattgc tctgtctctg ttttttgggt cagcggcatt catgtatatt 780
 aaatattctt ctggatctat ggagcaggga aaagtttctt ctgttttcta cactaatgtg 840
 gtgcccattg tcaatcctct catctacagt ttgaggaaca aggatgtcaa agttgcactg 900
 aggaaagctc tgattaaaat tcagagaaga aatatattc 939

<210> 823
 <211> 1071
 <212> DNA
 <213> Unknown (H38g673 nucleotide)

<220>
 <223> Synthetic construct

<400> 823
 atgaattggg taaataagag tgtccacag gagttcattc tgttagtgtt ctcagatcaa 60

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ggcaatctga	caataattct	tgtgtcacat	gtggatttca	aactccacac	ccctatgtac	180
ttttttctta	gcaatctctc	actcctggac	ctttgtctata	ccacaagtac	agttccacaa	240
atgctggtaa	acatatgcaa	caccaggaaa	gtaatcagtt	atgggtggctg	tgtggcccag	300
cttttcattt	tcttggcctt	gggttccaca	gaatgtcttc	tcttggccgt	catgtgcttt	360
gataggtttg	tagctatttg	tcggcctctc	cattactcaa	ttatcatgca	ccagaggctc	420
tgcttccagt	tggcagctgc	atcctggatt	agtggcttta	gcaattcagt	attacagtcc	480
acctggacac	ttaagatgcc	actgtgtggt	cacaaagaag	tggatcactt	cttctgtgaa	540
gtccctgctc	tgctcaagtt	gtcctgtgtt	gacacaacag	caaatgaggc	tgaactattc	600
ttcatcagtg	tgctattcct	tctaataccc	gtgacactca	tccttataac	gtatgctttt	660
attgtccaag	cagtgttgag	aatccagttc	gctgaaggtc	aacgaaaggc	atttgggaca	720
tgtggctccc	atctaattgt	ggtgtcactt	ttttatggta	cagctatctc	catgtacctg	780
caaccacctt	caccagctc	caaagaccgg	ggaaagatgg	tttctctctt	ctgtggaatc	840
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tttaaaaggt	tggttgcaaa	gagtcttctt	aatcaagaaa	taagaaatat	gcaaagtata	960
agctttgcta	aagacacagt	gcttacttac	cttactaact	tctccgcaag	ttgtcctatt	1020
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<210> 824

<211> 991

<212> DNA

<213> Unknown (H38g674 nucleotide)

<220>

<223> Synthetic construct

<400> 824

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ccagatctcc	aactccctct	gttcttccctg	tttctagtgt	atggtcactg	cggttgggaaa	120
tttgctttgg	taactctcgt	tgtgctcaat	tcacaccttc	ataccccat	gtactttttc	180
ctctttaact	tgtccttcat	agatctctgt	tattcttctg	tgtttacacc	ccaaatgctg	240
atgaacttca	taacacagaa	ggatattatc	tcccacatgg	ggtgcatgtc	ccagcttttc	300
ttttttcttt	attttttttt	ggtattttctg	aatgctatgt	gctcacctca	atggcctatg	360
atcagcatgt	caccatgatc	accatgtagc	catctgtaac	ccacttttgt	ataatattgc	420
catgtccccc	aaagtgtact	ctcaccttat	gcttggttta	tacttgctag	ccttttctag	480
tgccatggcc	cacactggat	gcatgctgag	actgaccttc	tgtgatgcaa	acaccatcca	540
tccttatttg	tgtgacatcc	tcctctctgt	ccagctctct	tgacaccgga	cctacatcaa	600
tgagctgggtg	gtttccactg	cagcagtcac	tattttccac	tgtcaccata	tttatctctt	660
gtgggttgag	ctcctacatc	atcctccaca	tcaactccaa	ggagggcagg	tccaaagcct	720
tgaacacctg	cagttccaac	ctaattgtctg	tttctcttag	tttggatcgt	gtgcatttat	780
gtgtctcaaa	ccatcttctg	ctgggtccat	ggatgaggga	aagatttctt	ctgtctttta	840
caccaatata	gctcccttga	tgaaccctt	aatctacagt	ttgatgaata	aaatgttcaa	900
ctttctctga	gaaaaaaacc	ctagtaggaa	aaaattttga	ctagaaaatag	tatctttctg	960
tgcattgtatt	tttaggacag	ggagcttctg	t			991

<210> 825

<211> 997

<212> DNA

<213> Unknown (H38g675 nucleotide)

<220>

<223> Synthetic construct

<400> 825

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ccagatcttt	aactccctct	gttcttcatg	tttcttgtaa	tgtatgttgt	cactgtgata	120
agaaactttg	tcttggtaat	tctaactatg	cgaaattcac	gtcttcacac	tcccaagtac	180
tttttctttt	ctaaattgtt	cttcacagac	ctctgttatt	cttctgtgtt	tatactccaa	240
cttccgagga	agtgtatttc	agaggagaat	gttatctcct	acatggtttg	catgatctag	300
cttttctttt	tctttttctg	tttttttttt	tttttaattt	atttctgaat	gttatatgct	360
gacgtcaatg	gcctatgatt	gctgtgtggc	catctgttac	ccacttcttt	atcacattgc	420

catgtccct	aaagtgtgtt	tcagccttat	gcttggttcc	tacttcctat	ccttttctgg	480
ggccatggc	cacactggat	gcattgctgag	gctgacctgt	gatgcaaaca	ccatcaatca	540
ttacttccgt	gacatcctcc	ctgtgttcca	gctctctgc	accagcacct	acatcaatga	600
actgggtggt	ttcattgtgg	caggcatcaa	taccattgtg	cccactgtca	ccgtctttat	660
ctcttatggt	gacatcctct	ccaggatcct	ccacatcagt	tccaatgagg	gaagggtccaa	720
agccttcagc	acttgcagtt	cccacataat	tgctgtttct	ctgttctttg	gattaagtgc	780
atztatgtat	ctcaaaccat	cttctgctgg	gtctatggat	gagggaaaat	tctcttctgt	840
tttttatatg	aacgggcttc	ccatgatgag	ctccttaatc	tacagcttaa	ggaggaaaaga	900
tgttaaattt	gccatgggaa	aatctctgag	taggagaatg	tttttgccat	aaacaacatt	960
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<210> 826

<211> 939

<212> DNA

<213> Unknown (H38g676 nucleotide)

<220>

<223> Synthetic construct

<400> 826

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cgggtgctgg	aaatgctgtt	tttcatggca	ttctcagcca	tttatatgct	aacgctttca	120
gggaacattc	tcattcatcat	tgccacagtc	tttactccaa	gtctccatac	ccccatgtat	180
ttcttctctga	gcaatctgtc	ctttattgac	atctgccact	catctgtcac	tgtgcctaag	240
atgttggagg	gtttgctttt	agaaagaaag	accatttctt	ttgacaactg	catcacacag	300
ctcttcttcc	tacatctctt	tgctgtgcc	gagatcttct	tgctgatcat	tgtggcgat	360
gatcgttacg	tggctatctg	cactccactc	cactacccca	atgtgatgaa	catgagagtc	420
tgtatacagc	ttgtctttgc	tctctgggtg	gggggtactg	ttcactcact	agggcagacc	480
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ccagacacca	gcttctccat	tgacaagggtg	gtgtctgtct	tctacacagt	ggtcacccct	840
ttgtctgaatc	ccttcattta	cacttgagg	aatgaggagg	taaaaagtgc	catgaagcag	900
ctcaggcaga	gacaagtttt	tttcacgaaa	tcatataca			939

<210> 827

<211> 992

<212> DNA

<213> Unknown (H38g677 nucleotide)

<220>

<223> Synthetic construct

<400> 827

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acagatctcc	aaccgcccct	gttcttctctg	tttctagtaa	tgggtgtggt	tgctgggtag	120
gggaatttgg	gcttggtaac	tctgattgtg	ttcagttcac	actttcatgc	acccatgtac	180
ttttttcttt	ttagtttagc	ttttatagac	cactttttatt	cttctgtgtt	tattccaaaa	240
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tttttttctt	tctttttttt	tttttttttg	ttatttctga	atgctatggt	ttgacgtcaa	360
tggctctctga	tcactagtgg	ccatggccat	ctgtaacccg	cttctgtata	acattgccat	420
gtccccataa	gtgtgttcca	gccatagtct	tggttcctac	ttctggccct	tttctggggc	480
catggcccat	accaggtgca	tgctgaaact	gacctctgt	gagggcaaaca	ccatcaacca	540
ctacttctgt	gacacccttc	atctgctcca	gctctcttgc	accagcacct	acgtcagtga	600
gttgatgggt	ttcattgcag	caggcatcat	tttactgtg	cccagtatca	ccatctttat	660
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tgtgtcttaa	attatcctca	actgggacta	taaatgaagg	taaaatatct	tctgtctttc	840
acattgatgt	agttcccatg	ataaactcct	caatttacag	cttaagaaac	aatgatgtta	900

aacttgccctg gagaaaaatc ctaagttgga gaaaatttcc atttgaaact atctctctcc 960
atgcataatg ttacaggaca aggagattct gt 992

<210> 828

<211> 966

<212> DNA

<213> Unknown (H38g678 nucleotide)

<220>

<223> Synthetic construct

<400> 828

atgagtgtcg tagaagccaa taacatttct gggcctgtga gtgaatttat cctcctgggc	60
ttccccctgcc tgctgcaggg agaccaagat cctcctcttt gtggtcttct ccctcatcta	120
ccttctgacc ctcattgggtg acacatccat catctgcgt gtgtggtcaa gccagaaact	180
ccacacacct atgtacatcc tcttggtctaa tttctcttct ctggagatct gctgcattag	240
ttctgatgtc ccaaaatgtt ggccaatctc atctcccata tcaagagcat ctccatgct	300
ggctgcctgc tccagttctt ctacttctcc atgtgtgctg cagaaggcta ctttctgtct	360
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ctgatgcctg cagtgcctat gtcccgagtg ccttctgtgt gccctaaccat cactgaccat	540
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gcttctctta catgtgcttc ccatttcttg gttgttctt tcttctatgg ctccagtcattg	780
gtgatgtatg tgagtccagg ctccaggagc cgccctggga cacagaaatt tgtgacattg	840
ttttactgca cagcaacccc attctttaat cccctgacct acagtctctg gaacaaagat	900
atgacagatg cccttaaaaa agtgctggga gtgccatcaa aagaaatata ttggaacaca	960
ctgaaa	966

<210> 829

<211> 1003

<212> DNA

<213> Unknown (H38g679 nucleotide)

<220>

<223> Synthetic construct

<400> 829

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ttatctgtaa atcataaggc acggatagct atgttttcca tgttccctcat tttttatgtc	120
ctgacactga ttgggaatgt tctcattgtc ataactatta tctatgacca ccggctccat	180
actcccatgt atttcttctc cagcaacctg tcctttattg atgtctgcca ctccactgtc	240
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gtcatggcct atgatcggtg tgtggccatc tgtaaacccc tgcagtacat gatagtgtg	420
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atagccctca cctcccttac catcaagctg ccctactgtg gtcctgatga gattgacaac	540
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agatcctcat tgtctccaac agtggattga tctccgtggg ctgttttctg gtccctggtg	660
tgtcctacgc agtcacctg gtgagctctga ggcagcagat ctccaagggc aagtgggaagg	720
ccctgtccac ctgtgcagcc catctcactg tagttacact gttcctggga cactgcattc	780
tcatctatcc ccgcccattc accagcctcc cagaggacaa ggcagtatct gtgtttttca	840
ctgcagtcac cccctgtctg aacccattta tctataccct taggaatgaa gaaatgaaga	900
gtgccttaaa caagttagtg gggagaaaag agagaaaaga agaaaaatga aaatgtctac	960
gtccttagga tacgtggtgc tccaaattaa agaagcgcct tgc	1003

<210> 830

<211> 478

<212> DNA

<213> Unknown (H38g680 nucleotide)

<220>

<223> Synthetic construct

<400> 830

acggggactg	gatgatggct	gtgtcatgcc	atgatacctaa	ctccccctcac	ttccagttac	60
cttactgtgg	cctaacaagg	tgggctatac	ttctgtgata	tcctgcagtg	tacctctagc	120
ctgtaaggac	acatcccttag	cccagagggt	aggttttaca	aatgttgggc	ttttgtctct	180
catttgcttt	tttctcatcc	ttgtttccta	tacttgcatt	gggatttcca	tatcaaaaat	240
ccgctcagca	gagggcaggc	agcggggcctt	ctccacctgc	agcgctcacc	tacttgcaat	300
cctttgtgct	tatgggccag	tcategttat	ctatctacaa	cccaatccca	gtgccttgct	360
tggttccata	attcagatat	tgaataatct	ggtaacccca	atgttgaatc	cactaatcta	420
tagccttagg	aataaggatg	taaaatcaga	tcagccctga	ggaatgtatt	tcccaaga	478

<210> 831

<211> 400

<212> DNA

<213> Unknown (H38g681 nucleotide)

<220>

<223> Synthetic construct

<400> 831

ttactatttt	taatgttctt	tattacttcc	ttgggtcata	aattccatct	gatatacattt	60
cccttcagtc	aacaaaccac	ctaacaacaaa	tactttataa	tttttgaagt	atgactctgc	120
tgataacata	cactcacagc	attaatttat	tgttaaatgt	ccttggtcta	gggtatagac	180
ctattttagt	ggtataccct	ttagtcccag	agtattgttc	ttatttctag	ggcgtgggtcc	240
ttctgggttt	tatttagaaa	gcctaagttt	ttaccgaacc	tctttcactt	ggcagcactt	300
gcatttataa	ttctattgcc	ctagttgagg	gtaactgcta	aaatcttttc	tctcagccat	360
ctggctgctg	ttttctactt	actttcttag	agtcttgtct			400

<210> 832

<211> 933

<212> DNA

<213> Unknown (H38g682 nucleotide)

<220>

<223> Synthetic construct

<400> 832

atggctactt	caaaccattc	ttcaggggct	gagtttatcc	tggcaggctt	gacacaacgc	60
ccagaacttc	aactgccact	cttcctcctg	ttccttgga	tatatgtggt	cacagtgggtg	120
gggaacctgg	gcatgatctt	cttaattgct	ctcagttctc	aactttaccc	tccagtgtat	180
tattttctca	gtcatttgct	tttcattgat	ctctgctact	cctctgtcat	tacccttaag	240
atgctgggtg	actttgttcc	agaggagaac	attatctcct	ttctggaatg	cattactcaa	300
ctttattttt	tccttatttt	tgtaatgtca	gaaggctacc	ttctgacagc	catggaatat	360
gaccgttatg	ttgctatctg	tcgcccactg	ctttacaata	ttgtcatgtc	ccacaggggc	420
tgttccataa	tgatggctgt	ggtatactca	ctgggttttc	tgtgggccac	agtccatact	480
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attattggag	gagttaatac	cttagcaact	acactggcgg	tccttatctc	ttatgctttc	660
atthttctct	gtatccttgg	tattcattcc	actgaggggc	aatccaaagc	ctttggcact	720
tgtagctccc	atctcttggc	tgtgggcate	ttttttgggt	ctataacatt	catgtatttc	780
aagccccctt	ccagcactac	tatggaaaaa	gagaagggtg	cttctgtgtt	ctacatcaca	840
ataatcccca	tgtctgaatcc	tctaactctat	agcctgagga	acaaggatgt	gaaaaatgca	900
ctgaagaaga	tgactagggg	aaggcagtc	tcc			933

<210> 833

<211> 948

<212> DNA

<213> Unknown (H38g683 nucleotide)

<220>

<223> Synthetic construct

<400> 833

atggtgatcc	tgtcctggga	aaaccaaacg	atgagagtgg	aattcgtgct	tcaaggattc	60
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cctatgtact	tcctcctggg	gaacttgctc	tgtctggaga	tctgggtatac	ctctaacatc	240
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ctggcacaat	tctacttctt	cggatccctg	gctgccacgg	agtgcctctt	gctcactgtg	360
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ggcccccttt	gcctcaggct	agctgctggc	tcttggttct	gctgcttctt	ccttacagca	480
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ttttgtgact	tcacccctct	ggttcatctc	tcctgcatgg	atacctcagt	gactgagacc	600
attgcctttg	ccacctcttc	tgtagtaact	ctgatcccat	ttctcctcat	tgtagcctcc	660
tactcctgcg	tcctttctgc	tatcctaaga	atccccatctt	gcacaggcca	gaaaaaggcc	720
ttctccacct	gctcttccca	cctcactgtg	gtcatagtgt	tttatgggac	actgattgcc	780
acataccttg	tgccctcagc	caactcatcc	caactcttgt	gcaaagggtc	ctctctgctc	840
tacatcatcc	tgacacccat	gtttaacccc	atcatttata	gcctgagaaa	tagagacatc	900
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<210> 834

<211> 946

<212> DNA

<213> Unknown (H38g684 nucleotide)

<220>

<223> Synthetic construct

<400> 834

ccagtgagga	ccttgagagc	tactaatatc	actggatttg	tgaatgagtt	catcctcttg	60
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cttctgaccc	tcctaggtaa	cacatccatc	atctgtgctg	tgtgggtcaag	ccagaaactc	180
cacacaccta	tgtacatcct	actggccaat	ttctccttcc	tgagatctg	ctgtgtcagt	240
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ggctgcctgc	tcgggttcta	cttcttctcc	atgtgtgctg	cagagtgcct	atctctgtca	360
gtgatgtctt	ttgatagggt	tcctgccatt	tgtagacctt	tgactatcc	caccttaatg	420
acccatcacg	tttgtgctca	ttttgtgat	cttctgctgg	gtgggtggct	gtctctgggt	480
attgacccct	ttgacactaa	tatctcagggt	gctcttttgt	ggtccaaaca	ctatcgacca	540
ttttttctgt	gatctggcac	ctttgtctggc	actgtcttgt	gctccaatac	ctggaattac	600
tctgacttgt	ggtatcatta	gcgctctcat	catctttctt	accttcttgt	atatccttgg	660
gacttatttc	tgtgttctaa	gcacagtgc	acaggtgcct	tcaggcttag	gaaggcataa	720
ggctttctca	acttgtggct	gtcaccttgc	tgtagtgtct	ctcttctatg	gttctcttat	780
ggtgatgtat	gttagcccag	gttctgggga	ctatcatggg	ataaagaaat	ttgcgacctt	840
gttctatact	ttgtcaactc	cattctttaa	tcctctgata	tacagtttcc	ggaacaagga	900
tatgaaagag	gcactaaaga	aatttctgag	gaatcgccac	actgtc		946

<210> 835

<211> 946

<212> DNA

<213> Unknown (H38g685 nucleotide)

<220>

<223> Synthetic construct

<400> 835

cttatagcta	caggaaactg	gacaagaata	agtaagttta	tcctcatgag	cttctcttcc	60
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ctgatgggaa	actgcctcat	cattctgggt	accctagctg	accccatgct	acacagcccc	180
atgtactttc	tcctcagaaa	cttatctttc	ctggagattg	gcttcaacct	agtcattgctg	240

cccaacatgc	tgtggaccct	gcttgcccag	gacacaacca	tctccttctt	tggctgtgcc	300
acttagatgt	atttcgtctt	cttcttttgg	gtggctgaat	gcctcctcct	ggctaccatg	360
gcatatgacc	gctatgtggc	catctgcagt	ccttgcacta	cccagtcata	atgaacccaa	420
ggactcttgc	caaactggct	gctacctcct	ggttcccagg	ctttcctgta	gctactgtgc	480
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gtgacagccc	acctgtgctg	aggctggctt	gtgcagacac	agcactcttt	gagatctacg	600
ccatcgtcgg	aaccattctg	gtggtcata	tcccctgctt	gctgatcttg	tgttcctata	660
ctcacattgc	tgttgccatc	ctcaagatcc	catcagctaa	agggaagaat	aaagcctttt	720
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acttcgggcc	taaatcaaat	aattcacctg	agggcaagaa	gctgctatca	ttgtcctaca	840
ctgttatgac	tcccatgttg	aaccccatca	tctacagcct	gagaaataac	gaggtgaaga	900
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<210> 836

<211> 973

<212> DNA

<213> Unknown (H38g686 nucleotide)

<220>

<223> Synthetic construct

<400> 836

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gggcaacttg	agtttaatta	atctaatttg	cctgaattca	caccttcaca	ctcccatgta	180
ttttttcctt	ttcaatctgt	ccttcattga	tctctgttat	tcatttgtct	ttacccccaa	240
aatgctgatg	agcttttatc	cagagaggaa	catcatctcc	tttccaggat	gcgtaactca	300
gctctttttc	ttctgctttt	ttgtccactc	tgagtgtat	gtgctgacag	ccatggccta	360
tgatcgctat	gtggccatct	gcaaaccctt	tctgtacatg	gtcaccacgt	cccctcagat	420
ctgttctcta	ctgatgcttg	gttcatatgt	gatgggggtt	gctggggcca	tggtccacac	480
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tgttatttga	ggcacagtgg	ttatagtatc	aagcctcatt	atcttaatct	cttatgcttt	660
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taagttatca	tctgattggg	atatgggtca	ggggaagtgt	ctctcagtgt	tttacacgaa	840
tgaggtagcc	atgctgaacc	ccctcattta	tagcctcagg	aacaaggatg	tcaaacttgc	900
tctaaaggaa	accctaaata	aaattacaaa	ctgagtagag	ccaatgggtg	tgcttagacc	960
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<210> 837

<211> 992

<212> DNA

<213> Unknown (H38g687 nucleotide)

<220>

<223> Synthetic construct

<400> 837

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ccacacaccg	agcagctgct	atttatcgta	ttattgggtg	tctacctggg	cactgtgctt	120
ggaaatctgc	ttctaattctc	ccttggttc	gttgactccc	aacttcacac	acccatgtat	180
ttttttctct	gcaacttgct	tctggctgac	ctctatttct	ctaccaacat	acttctcag	240
gcactagtc	acctgctttc	cataaacaac	ctcattgc	tcacactttc	tctaactcaa	300
cttctctttt	tctctatttt	tgggtgacct	agtgcgccct	tattgcagtg	atgtcctata	360
atccctatgt	tgcaatctgc	aatcctctgc	attaccctaa	catcatgacc	tggaaagtgt	420
gtgtccagct	ggcaacagga	tcattggacca	gtggcattct	gggtgtctgt	gtagacacca	480
ccttcacact	gaggctaccc	taccgaggca	gtaacagcat	tgctcatttc	ttttgtgagg	540
cccctgcact	attgatctta	gcatccacag	acacccatgc	atcagagatg	gccattttatc	600
ttacgggggt	tgtgattctc	ctcatacctg	tttttctgat	tctgggtatcc	tatggccgta	660
tcatagtaac	tgtggtcaag	atgaagtcaa	ctgtggggag	tctcaaggca	ttttctacct	720

gtggctccca cctcatgggtg gtcatacttt taaatggatc agcaatactc acttgcata	780
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ccatgcttaa tcccctcatc tatagcctga gaaacaagga tgtgaaggca gctctgagga	900
aagtagccac aaggaatttc ccatgaaggc ttggaatctc acactgacag tgagctcaga	960
gaaccttttg gcttcctact tcaaagactt gc	992

<210> 838

<211> 549

<212> DNA

<213> Unknown (H38g688 nucleotide)

<220>

<223> Synthetic construct

<400> 838

atggaaaaaa gcaataatag cactttgttt attctcttgg ggttttccca aaataagaac	60
attgaagtcc tctgctttgt attatttttg ttttgctaca ttgctatttg gatgggaaac	120
ttactcataa tgatttctat cacgtgcacc cagctcattc accaaccat gtatttcttc	180
ctcaattacc tctcactctc cgacctttgc tacacatcca cagtgaaccc caaattaatg	240
gttgacttac tggcagaaag aaagaccatt tcctataata actgtatgat acaactcttt	300
accacccatt tttttggagg catagagatc ttcattctca cagggatggc ctatgaccgc	360
tatgtggcca tttgcaagcc cctgcactac accattatta tgagcaggca aaagtgtaac	420
acaatcatca tagtttggtg tactggggga tttatacatt ctgccagtca gtttcttctc	480
accatctctg taccattttg tggcccaaat gatatagatc actactctcg cgatgtgtat	540
cctttgctg	549

<210> 839

<211> 670

<212> DNA

<213> Unknown (H38g689 nucleotide)

<220>

<223> Synthetic construct

<400> 839

ttgcctgaca tcggtttcac ctccaccacg gtccccaaga tgagcgtgga catccagtct	60
cacagcagag tcattctcta tgcaggctgc ctgactcaga tgtctctctt tgccattttt	120
ggaggcatgg aagagagaca tgctcctgag gtgatggcct atgacctgtt tgtagccatc	180
tgtcaccttc tatatcggtc agccatcttg aaccggtttg tccgtggctt cctagatttg	240
ttgtctttgt tgttggtttt ttttttttct tctcagtctt ttagactccc agctgcacaa	300
cttgattgcc ttacaaatga cctgcttcaa ggatgtggaa attccgaatt tcttctggga	360
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ttccctgct gccgtatttg gttttcttcc catctcgggg acccttttct cttactgtaa	480
aattgtttcc tccattctga gggtttcate atcaggtggg aagtacaaac cttctccacc	540
tgtgggtctc acctgtcagt tgtttgctga ttttatggag caggcgttgg agggtaacct	600
ggttcagatg tgtcatcttt cccgagaaag ggtgcagtgg cctcagtgc gtacgtacac	660
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<210> 840

<211> 645

<212> DNA

<213> Unknown (H38g690 nucleotide)

<220>

<223> Synthetic construct

<400> 840

atggacgtca ggctcatctg caccaccgta cccaagatgg ccttcaacta cttgtctggc	60
agcaagtcca tttctatggc tggtgtgcc acacaaattt tcttctgtgt atcactgctt	120
ggctctgaat gctttctgtt ggctgttatg tcttatgact gctacattgc catttgccac	180
cctctaagat acaccaatct catgagaccc aaaatttcta gacttatgac tgccttctcc	240

tgatcctgg	gctctacaga	tggaatcatt	tatgctgtag	ccacattttc	cttctcctac	300
tgtgggtctc	gggaaatagc	ccacttcttc	tgtgagttac	cttccctact	aatectctca	360
tgcaatgaca	cgtcaatatt	tgaaaagggt	attttcattt	gctctatagt	aatgcttggt	420
ttccctgttg	caatcatcat	tgttccctat	gctggagtta	ttctggctgt	cattcacatg	480
ggatctggag	agggtcgtcg	caaagctttc	acgacctgtt	cctctcacct	catgggtggg	540
ggaatgttct	atggagcagg	tttgttcatg	tacatacagc	ccacatctga	tcgctcccca	600
acgcaggaca	agctggtgtc	tgtattctac	accatcctca	ctccc		645

<210> 841

<211> 380

<212> DNA

<213> Unknown (H38g691 nucleotide)

<220>

<223> Synthetic construct

<400> 841

aatctcctcc	ccgtgtggac	ccctggaagc	agggtgccct	tcattgatcac	aaattttctgt	60
ctccgagaag	caaggcatgt	cctttcccaa	gaaacttttc	cagaatcaca	aacttttcct	120
actctttgca	gggatgaatg	tatttctgca	gactgtgatg	gcctatgacc	actttgtggc	180
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tctggtgtcc	tggagcatga	gtgccctgaa	ttcctcactg	caaagcagaa	tgtgttgag	300
ctgtccttct	gcacaaactt	ggaaatcccc	ccattttttt	ctgtgaactt	aatcagttga	360
tctgcttgct	ctgttctaac					380

<210> 842

<211> 648

<212> DNA

<213> Unknown (H38g692 nucleotide)

<220>

<223> Synthetic construct

<400> 842

tttgttgatt	tctgtttattc	caccacgatt	acacccaaac	tgctggagaa	cttgggttggt	60
gaagatagaa	ctatctcctt	cacaggatgc	atcatgcagt	tattctttgt	ctgcatattt	120
gtagtaacag	aaacattcat	gctggcagtg	atggcctatg	accgatatgt	ggcgggtgtgt	180
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ataagcggcc	tgggtgatcat	tctcactccc	tatgctttca	tttttatcac	tgtcatgaag	480
acgccttcca	ctggggggcg	caagaaagcg	ttctccacgt	ctgcctccca	cttgacggcc	540
attaccattt	tccatgggac	tatccttttc	ctctactgtg	ttcctaactc	caaaaagttcg	600
tggctcatgg	tcaaggtggc	ctctgtcctt	tacacagtgg	tcattccc		648

<210> 843

<211> 643

<212> DNA

<213> Unknown (H38g693 nucleotide)

<220>

<223> Synthetic construct

<400> 843

ttgccagaca	ttggtttcac	cttggccacg	gtccccaaga	tgattgtaga	catgcaatca	60
catagcagaa	tcattctccca	tgcaggctgt	ctgacacaga	tacctttctt	tgtccttttt	120
gtatgtatag	atgacatgct	cctgactgtg	atggcctatg	actgatttgt	ggccatctgt	180
cacccctgc	actaccagc	catcatgaat	cctcacctct	gtgtcttctt	agtgttgatg	240
tctttttcct	tagcctgttg	gattcctagc	tgcacaactg	gattgtttaca	attcacctgc	300
ttcaagaatg	tggaaatctc	taattttttc	tgtgactgat	ctcaacttct	caaccttgcc	360


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tggtctgact gtcacagta acatattcat acgttttagat agtactatat ttggctttct 420
tcccatttca gggatccttt tgtcttacta taaaattgtg cctccattc taagaattcc 480
attgtcagat ggggaagtata aagccttctc cacctgcggc tctcacctgg caattgtttg 540
cttattttat ggaacaggca ttggcatgta cctgacttca gctgtgtcac cagccccag 600
gaatggtgtg gtggcatcag tgtgttacgc tatggtcacc ccc 643

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<210> 844

<211> 652

<212> DNA

<213> Unknown (H38g694 nucleotide)

<220>

<223> Synthetic construct

<400> 844

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cacagcagag tcatctatgc aggctgcctg actgtgatgt ctctctttgc catttttggg 120
ggcatggaag agacacatgc tcctgaatgt gatggcctat gtccggtttg tagccatctg 180
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tgggttttct cccatctcgg ggacctttt ctcttactat gaaattgttt cctccattct 480
gagggtttca tcataagggtg ggaagtataa ggccttcgcc acctgtgggt ctcacctgtc 540
agtcgtttgc tgattttatg gaacaggcgt tggagggtac ctcagttcag atgtgtcatc 600
ttccccgaga aagactgcag tggcctcagt gatgtacgca gtggtcacc cc 652

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<210> 845

<211> 692

<212> DNA

<213> Unknown (H38g695 nucleotide)

<220>

<223> Synthetic construct

<400> 845

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cacagcagag tcatctcta tgcaggctgc ctgactcaga tgtctctctt tgccattttt 120
ggaggcatgg aagagagaca tgctcctgag tgtgatggcc tatgaccggt ttgtagccat 180
ctgtcacctc ctatatcgtt cagccatctt gagcccggtg ttctgtgcct tcctagattt 240
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ccaggaacat caacatgtat ttccctgctg ctgtattttg ttttcttccc atctcgggga 480
ccttttctct tacaatggag taaaattgtt tctccactc tgagggtttc atcatcagg 540
gggaagtata aaccttctcc acctgtgggt ctcacctgtc agttgtttgc tgattttgtg 600
gaacaggcgt tggagggtac ctcggttcag atgtgtcatc ttccccgaga aagagtgcag 660
tggcctcagt gatgtacac gtggtcacc cc 692

```

<210> 846

<211> 939

<212> DNA

<213> Unknown (H38g696 nucleotide)

<220>

<223> Synthetic construct

<400> 846

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atgctggcta gaaacaactc cttagtgtg gaatttatct ttgctggatt aacagatcgt 60
ccagagttcc ggcaaccctt ctttttctct tcttagtga tctacattgt caccatggta 120
ggcaaccctt gcttgatcac tcttttcggg ctaaattctc acctccacac accaatgtac 180

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tatttcctct	tcaatctctc	cttcattgat	ctctgttact	cctctgtttt	cactcccaaa	240
atgctaata	actttgtgtc	aaaaaagaat	attatctcca	atgttggtg	catgactcgg	300
ctgtttttct	ttctcttttt	cgtcatctct	gaatgttaca	tggtgacctc	aatggcatat	360
gategctatg	tggtccatctg	taatccattg	ctgtataagg	tcaccatgtc	ccatcaggtc	420
tgttctatgc	tcacttttgc	tgcttacata	atgggattgg	ctggagccac	ggccccacacc	480
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attgtcacta	gcattcttca	tatcaaatac	actcaaggaa	gatcaaaagc	cttcagtact	720
tgtagctctc	atgtcattgc	tctgtctctg	ttttttgggt	cagcggcatt	catgtatatt	780
aaatattctt	ctggatctat	ggagcaggga	aaagtttctt	ctgttttcta	cactaatgtg	840
gtgcccacgc	tcaatcccc	catctacagt	ttgaggaaca	aggatgtcaa	agttgcactg	900
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<210> 847

<211> 924

<212> DNA

<213> Unknown (H38g697 nucleotide)

<220>

<223> Synthetic construct

<400> 847

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ggcaacctgg	gcatgattct	cctgattgca	gtcagccctc	tacttcacac	ccccatgtac	180
tatttcctca	gcagcttggtc	cttcgtcgat	ttctgtctatt	cctctgtcat	tactcccaaa	240
atgctgggtga	acttcctagg	aaagaagaat	acaatccttt	actctgagtg	catgggtccag	300
ctctttttct	ttgtggtctt	tgtggtggct	gaggggttacc	tcctgactgc	catggcatat	360
gatcgctatg	ttgccatctg	tagcccaactg	ctttataatg	cgatcatgtc	ctcatgggtc	420
tgctcactgc	tagtgctggc	tgccctcttc	ttgggctttc	tctctgcctt	gactcataca	480
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atcattgcgg	ggtttaaacac	cttggtgccc	accctagctg	ttgctgtctc	ctatgccttc	660
atcctctaca	gcacccctca	catccgctcc	tcagagggcc	ggtccaaagc	ttttggaaca	720
tgagctctc	atctcatggc	tgtggtgatc	ttctttgggt	ccattacctt	catgtatttc	780
aagccccctt	caagtaactc	cctggaccag	gagaagggtg	cctctgtatt	ctacaccacg	840
gtgatcccca	tgctgaaccc	tttaatatat	agtctgagga	ataaggatgt	gaagaaagca	900
ttaaggagg	tcttagtagg	aaaa				924

<210> 848

<211> 984

<212> DNA

<213> Unknown (H38g698 nucleotide)

<220>

<223> Synthetic construct

<400> 848

atggcacctg	gaaatggctc	tttcgtgact	gaattcattc	tggtgggatt	aacacatcag	60
ccagatctcc	agtccccctc	gttcttccctg	tttctagtaa	tctatgtggg	cactctgttg	120
ggaaacttgg	gcttggtaac	tctaattggg	ctgaactcac	accttcatac	ccccatgtac	180
ttcttctct	ttaacttgtc	cttcatagat	ctctgttatt	cttctgtgtt	tacacccaaa	240
atgctaata	actttatttc	agagaagaat	attatctcct	tcaaggggtg	catgacccaa	300
cttttctttt	tctgtttttt	ttggtcattt	ctgaatgtta	tgtgctgacg	tcaatggcgt	360
atgatcgctg	tggtccatctg	taacccactt	ctgtatcaca	ttgccatgtc	tcctacagtg	420
tgctccagcc	ttatgttttg	ttcctatttg	atggcccttt	ctggtgccat	ggccccacact	480
ggatgcatgc	tgagactgac	tttctgtgat	gcgaacacca	tcgatcacta	cttctgtgac	540
atcctccctc	tgtccagctc	ctcctgcacc	agcacctaca	tcaatgagct	ggtgggtttc	600
actgtggttg	gcaccaacat	cattgtgccc	actgttacca	tctttatctc	ttatgggttc	660
atcctctcca	gcacccctca	tatcagttcc	aaggagggca	ggtccaaagc	tttcagcact	720

tgcagttccc	atataattgc	tgtttctctg	ttctttggat	caggtgcatt	tatgtatctc	780
aacccatctt	ctgctgggtc	catggataag	agaaaattat	cttctgtctt	ttatacaaat	840
gtggttccca	tggtgaaccc	cttaatctac	agcctgagga	acaaagatgt	taaatttgcc	900
ctaagaaaag	ccctgagtag	taggaaactt	tgataagtaa	tagtatgtgt	ctgtgtgtat	960
agtcacaaga	cagggatatt	ctgt				984

<210> 849

<211> 940

<212> DNA

<213> Unknown (H38g699 nucleotide)

<220>

<223> Synthetic construct

<400> 849

atgaaaccag	ggaatgagac	acaaatttca	caattccttc	tcctgggact	ttcagaggaa	60
ccagaattgc	agcccttcct	ctttgggcta	tttctgtcca	tgtacctggt	caccgtgctc	120
gggaacctgc	tcatactcct	ggccacaatc	tcagactccc	acctccacac	ccccatgtac	180
ttcttctctt	ccaacctgtc	ctttgcagac	atctgttttg	tgtctaccac	tgtcccaaag	240
atgctgggtg	acatccagac	acagagcaga	gtcatcacct	atgcagactg	catcacccag	300
atgtgctttt	ttatactctt	tgtagtgttg	gacagcttac	tcctgactgt	gatggcctat	360
gaccggtttg	tggtccatctg	tcacccctcg	cactacacag	tcattatgaa	ctcctggctc	420
tgtggactgc	tggttctggt	gtcctggatc	gtgagcatcc	tatattctct	gttacaagc	480
ataatggcat	tgcagctgtc	cttctgtaca	gaattgaaaa	tccttcattt	tttctgtgaa	540
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actttgttgc	atatgttcga	tctcatcagc	tcaggggatg	aataaagcac	tttccacctg	720
tgcactctac	ctctcagttg	tctccttatt	ttattgtaca	ggcgtagggtg	tgtaccttag	780
ttctgtgca	accataact	cactctcaaa	tgctgcagcc	tcggtgatgt	acactgtggt	840
cacctccatg	ctgaacccct	tcactctacag	cctgaggaat	aaagacataa	acagagctct	900
gaatcgattc	ttcagagagc	agaaacagga	gggccatttt			940

<210> 850

<211> 971

<212> DNA

<213> Unknown (H38g700 nucleotide)

<220>

<223> Synthetic construct

<400> 850

cacacagagc	cacggaatct	cacaggtgtc	tgagaattcc	tcctcctggg	actctcagag	60
gatccagaac	tgcagtcggt	cctcgtcttg	ctgtccctgt	ccctgtccct	gaatctggtc	120
acggtgctga	ggaacctgct	cagcatcctg	gctgtcagct	ctgactcccc	cctccacacc	180
cccatgtact	tcttctcttc	caacctgtgc	tggtgctgaca	tcggtctcac	ctcggccacg	240
gttcccaagg	tgattctgga	tatgcagtcg	catagcagag	tcattctctca	tgtgggctgc	300
ctgacacaga	tgtctttctt	ggctcttttt	gcatgtatag	aaggcatgct	cctgactgtg	360
atggcctatg	gctgctttgt	agccatctgt	cgccctctgc	actaccagct	catagtgaat	420
cctcacctct	gtgtcttctt	cgttttgggt	tcctttttcc	ttaacctggt	ggattcccag	480
ctgcacagtt	ggatttgtgt	acaattcacc	atcatcaaga	atgtggaaat	ctctaatttt	540
ttctgtgacc	cctctcagct	tctcaacctt	gcctgttctg	acagcgtcat	caatagcata	600
ttcatatatt	tcgatagtag	tatgttttgt	tttcttccca	tttcagggat	ccttttgtct	660
tactataaaa	ttgtcccttc	cattctaagg	atgtcatcgt	cagatgggaa	gtataaagcc	720
ttctccacct	atggtctctca	cctaggagtt	gtttgtcggg	tttatggaa	agtcattggc	780
atgtacctgg	cttcagccgt	gtcaccaccc	cccaggaatg	gtgtgggtggc	atcagtgatg	840
taggctgtgg	tcacccccat	gctgaacctt	ttcatctaca	gcctgagaaa	caggacata	900
caaagtgcc	tgcggaggct	gcgcagcaga	acagtcgaat	ctcatgatct	gttccatcct	960
ttttcttgtg	t					971

<210> 851

<211> 1014

<212> DNA

<213> Unknown (H38g701 nucleotide)

<220>

<223> Synthetic construct

<400> 851

cccattgagc	agggaata	caccagggtg	aaggaatctc	ttttttcaag	gactgaccca	60
gtcccaagag	ctgagcttgg	tcttatttct	tttcttattt	tttgtgtact	cagcaactgt	120
gctgggtaac	ctcctcatca	tggtcgtggg	gacctgtgag	tctcgccttc	acacccccac	180
gtacttcctg	ctctgcaatc	tctctgtgtt	ggttatctgc	ttctcctcca	tcactgctcg	240
gaaggtgcta	atagaccttt	caagcagaaa	gaccatctcc	ttcaatgggt	gcatgacaca	300
gatgttttct	ttccacctcc	tcgggtggag	agacgttttt	tctctctttg	tgatggcggt	360
tgaccaatac	atggccatct	tcaagcccc	gcactgtgtg	accatcgtga	gtagggggaca	420
gtgctcccc	acatcgtgag	tagggggcgt	gagtggggcg	caggcctcat	catggcttcc	480
tggtgtgggg	gtttgtccac	tccattgtgc	aggtatttct	gttgtcctca	ctcccttctg	540
tggacatcat	atgattgatg	gtttctactg	tgatgtcccc	caggctcctca	aacttgccctg	600
caccacacac	tttgtctctg	aggtcttaat	gatttccaat	aatggcttga	tctctatgct	660
gtggttcac	tttctcctca	tatcttacac	ggtcactctg	atgatgttga	ggctcacac	720
tgaggaaggc	aggaggaaa	ccatcgccac	ctgcacctcc	cacatcactg	tggtgacct	780
gcatttcctg	ccctgcatct	atgtgcatgc	ccagccttca	ctgcctctcc	cacggacaga	840
gctgtctcca	tcacctttac	agtcattatt	cctgtcctga	accccatgat	ctacacctg	900
aggaaccagg	agatgaagtc	agccttgagg	aggcggaaga	aaagaccttc	tggaaggga	960
tagatgctac	gaagtccaga	ttggaaaatc	agaactgaaa	agtatttctt	cata	1014

<210> 852

<211> 1004

<212> DNA

<213> Unknown (H38g702 nucleotide)

<220>

<223> Synthetic construct

<400> 852

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tggggaacct	gctcatcat	ct	ggccgtca	gcc	ctgactc	ccacctccac	acccccatgt	180	
acctcttct	ctccaacctg	tc	cttgccctg	acat	cggttt	cacctccagc	atgggtcccca	240	
agatgattgt	ggacatctaa	tct	cacagca	gact	catctc	ctaggcaggc	tgctgactc	300	
ccatgtctct	ctttgccatt	ttt	ggaggca	tgga	agagag	acatgctcct	gagtgtgatc	360	
cctatgacct	gtttgtagcc	atct	gtcacc	ctct	atatca	ttcagccatc	atgaaccgt	420	
gtttctgtgg	ctttctagtt	ttgt	gtctt	tttt	ttctca	gtctctttta	gacgcccagg	480	
tgcacaactt	gattgcctta	caa	atgacct	gctt	caagga	tgtggaaatt	cctaatttct	540	
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actataagat	tg	tttccctc	attctg	aggg	tttcatc	atc	agggtgggaag	tataaggcgt	720
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ggtaacctcag	ttcagatgtg	tc	atcttccc	cggg	aaaaggc	tg	cagtggtg	tcagtgatgt	840
acacgggtgt	cacccccatg	ccga	acctct	tc	atctacag	cctg	agaaac	agggatatta	900
aaagcgtcct	gcggcgccg	cacgg	cagca	cagt	cta	atg	tca	atatctc	960
ccatgccttt	tgtagtgtg	gt	taaaaaag	gcag	caaggt	caaa			1004

<210> 853

<211> 945

<212> DNA

<213> Unknown (H38g703 nucleotide)

<220>

<223> Synthetic construct

<400> 853

atgaaaaact	gtaccagggt	aaaagaat	at	tttcccttg	gcctaacc	gaatggggac	60
acaagattgg	tcctatttct	tttctactc	tt	gggtgtaca	tgacgactct	gctgggaaac	120
ctcctcatca	tggtcactgt	cacctgtgaa	tc	tttgcccttc	acatgcccat	gtattttttg	180
ctccataatt	tatctattgc	cgatatctgc	tt	tctactcca	tcacagagcc	caaggttctg	240
gtggaccttc	tgtctgagag	aaagaccatc	tc	cttccaatg	gttgcttcac	tcagatgttt	300
ctcttccacc	ttattggagg	ggtggatgca	tt	ttctctat	cagtgatggc	attggatcaa	360
tatgtggcca	tttccaagtc	cctgcactat	gc	gaccatca	tgagtagaga	ccgttgcaat	420
gggctcacag	tggtcgctg	gttggggggc	tt	tgctccact	ccattgtgca	gattacctg	480
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tcattactca	agtctcaggc	aggatagggc	agg	aggagaaag	tcatctccac	ctgcacctcc	720
cacattcactg	tggtgaccct	gcattttgtg	cc	ctgcatct	atgtctatgc	ccggcctttc	780
actgccctcc	ccacggataa	ggccatctct	gt	caccttca	ctgtcatctc	ccctctgctc	840
aacccttgat	ctacactctg	agaaaccatg	aga	tgaagtc	aaccatgaag	agactgaaga	900
ctctgacctt	ctgataggaa	atagaccagt	gt	ttccctcc	ttctc		945

<210> 854

<211> 962

<212> DNA

<213> Unknown (H38g704 nucleotide)

<220>

<223> Synthetic construct

<400> 854

cacacagagc	cacggaatct	cacaggtgtc	tg	aaaagtgc	tcctgggact	ctctctgaga	60
ggatccagaa	ctgcagccca	tcctcgctgg	gct	gtccctg	tccatgtatc	tggtcacggg	120
gctgaggaac	gtgctcatca	tcctggctgt	ca	gctctgac	tcccacctcc	acacccccat	180
gtacttcttc	ctctccagcc	tgtgctgggc	tg	acatcggg	ttcacctcgg	ccactgttcc	240
caagatgact	gtggacatgc	agtcgcatag	ca	gagtcac	tcctatgtga	gctgcctgac	300
acagatatct	ttcttggtcc	tttttgcatg	ta	tgggaagac	atgctcctgt	gatggcctat	360
gacagagttg	tggccatctg	tcacccccctg	ca	ctatccag	tcacatgaa	tcctcacctt	420
cgtgtcttct	tagttttgct	gtcctttttc	ct	tagcttgt	tggattccca	gctgcacagt	480
tggatttgtg	tacaattcac	cttattcaag	aa	tgtggaaa	actctagttt	tgtctgtgac	540
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gtcaccacca	tgctgaactt	tttcatctac	ag	cctgagaa	acagggacat	acaaagtgcc	900
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gt							962

<210> 855

<211> 952

<212> DNA

<213> Unknown (H38g705 nucleotide)

<220>

<223> Synthetic construct

<400> 855

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ggtggcaacg	tcaccatcat	caccatcacc	ca	tgcgggata	ggtcccgcca	cactcccatg	180
taccacttcc	tgggtgtgct	gtccctctcg	ga	gacctgct	atacacgctg	gtcaccatcc	240
ccagcatgct	ggctcatctg	ctgatggaga	cc	aggccatc	tccatccctg	gctgtcaggc	300
tcagatgttt	ttcttctctg	gtctgggatg	ca	gccactgc	ttcctcctta	ccctgatggg	360
ttatgaccgc	tatgtggcca	tctgccaccc	cc	tgcgtac	tctatgggtca	tgagaccac	420
cgtttgcctc	tgctggggag	ccctggtttt	ct	gtctctggg	ttctcgggtg	ccttgatcga	480

gaccagcatg	atctttctcat	cgcccttttg	cggcggagac	cacgtggagc	acttcttctg	540
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ctttttcctg	agcgtcctgg	tggtgctgat	gtccttcgtc	ccgatcctct	tctcctatgc	660
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ggtgggtgatg	ccactgctga	accctgtggt	gtgcactctg	tggaacaagg	aggtgagagt	900
ggctctgagg	aggaccctgg	cgtggagccg	tggggttttt	aaataagaat	ct	952

<210> 856

<211> 339

<212> DNA

<213> Unknown (H38g706 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(339)

<223> n = A,T,C or G

<400> 856

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ggagacacta	ccgagaacca	gatgttcgcc	gcccgcgtgg	tcatectgct	gctgccgttt	120
gccgtcatcc	tggcctccta	cggtgccgtg	gcccagagctg	tctgttgcat	gcggttcagc	180
ggaggccgga	gggagggcgg	tgggcacgtg	ttgggtccca	cctgacagcc	gtctgcctgt	240
tctacggctc	ggccatctac	acctacctgc	agcccgcgca	gcgctacaac	cagcacgggn	300
ncagnttcgt	atcgtctctc	tacacccgtg	gtcacaccc			339

<210> 857

<211> 939

<212> DNA

<213> Unknown (H38g707 nucleotide)

<220>

<223> Synthetic construct

<400> 857

atggatcaga	gaaattacac	cagagtgaag	gaatttacct	tcctgggaat	tactcagtc	60
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ggaaacttcc	tcacatggtt	tacagttacc	tgtgaatctc	accttcatac	gcccattgtac	180
ttcctgctcc	gcaacctgtc	tattcttgac	atctgctttt	cctccatcac	agctcctaag	240
gtcctgatag	atcttctatc	agagacaaaa	accatctcct	tcagtggctg	tgctactcaa	300
atgttcttct	tccaccttct	ggggggagca	gacgtttttt	ctctctctgt	gatggcggtt	360
gaccgctata	tagccatctc	caagcccctg	cactatatga	ccatcatgag	tagggggcga	420
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acctcccaca	tcaccgtggt	gacctgcat	ttcgtgccct	gcactctatgt	ctatgcccg	780
cccttcaactg	ccctccccac	agacactgcc	atctctgtca	ccttcaactgt	catctccct	840
ttgctcaatc	ctataattta	cacgtgagg	aatcaggaaa	tgaagttggc	catgaggaaa	900
ctgaagagac	ggctaggaca	atcagaaagg	attttaatt			939

<210> 858

<211> 486

<212> DNA

<213> Unknown (H38g708 nucleotide)

<220>

<223> Synthetic construct

<400> 858

gtagccatat	gtaatccctt	gctttatcca	gtgatgatgt	ccaacaaact	cagcgctcag	60
ttgctaagta	tttcatatgt	aattgggttc	ctgcaccttc	tggttcatgt	gagtttacta	120
ttgcgactaa	ctttctgcag	gtttaacata	atacattatt	tctactgtga	aattttacaa	180
ctgttcaaaa	tttcatgcaa	tgggccatct	attaacgcac	taataatatt	tatttttggt	240
gcttttatac	aaatacccac	tttaatgact	atcataatct	cttatactcg	tgtgctcttt	300
gatattctga	aaaaaaagtc	tgaaaagggc	agaagcaaag	ccttctccac	atgcggcgcc	360
catctgcttt	ctgtctcatt	gtactacgga	actctgatct	tcattgtatgt	gcgtcctgca	420
tctggcttag	ctgaagacca	agacaaagtg	tattctctgt	tttacacgat	tataattccc	480
ctgcta						486

<210> 859

<211> 774

<212> DNA

<213> Unknown (H38g709 nucleotide)

<220>

<223> Synthetic construct

<400> 859

atgtactact	tcctctgcca	cctggccttg	gtagacgcgg	gcttcaactac	tagcgtgggtg	60
ccgccgctgc	tggccaacct	gcgcggacca	gcgctctggc	tgccgcgcag	ccactgcacg	120
gcccagctgt	gcgcacgcgt	ggctctgggt	tcggccgaat	gcgtcctcct	ggcgggtgatg	180
gctctggacc	gcgcggccgc	agtgtgccgc	ccgctgcgct	atgcgggggt	cgtctccccg	240
cgccatgtgc	gcacgcctggc	cagcgcctcc	tggctaagcg	gcctcaccaa	ctcgggttgcg	300
caaaccgcgc	tcctggctga	gcggccgctg	tgcgcgcccc	gcctgctgga	ccacttcac	360
tgtgagctgc	cggcgttgct	caagctggcc	tgcggaggcg	acggagacac	taccgagaac	420
cagatgttcg	ccgcccgcgt	ggtcacctcg	ctgctgccgt	tgccgctcat	cctggcctcc	480
tacgggtgccg	tggcccagac	tgtctgttgc	atgcggttca	gcggaggccg	gaggaggcg	540
gtgggcacgt	gtgggtccca	cctgacagcc	gtctgcctgt	tctacggctc	ggccatctac	600
acctacctgc	agcccgcgca	gcgctacaac	caggcacggg	gcaagtctcg	atcgctcttc	660
tacaccgtgg	tcacacctgc	tctcaaccgc	ctcatctaca	ccctcaggaa	taagaaagtg	720
aagggggcag	cgaggaggct	gctgcggagt	ctggggagag	gccaggctgg	gcag	774

<210> 860

<211> 948

<212> DNA

<213> Unknown (H38g710 nucleotide)

<220>

<223> Synthetic construct

<400> 860

atgcagagag	ccaatcactc	cacagtgacc	caattcatcc	tcgtcggctt	ctctgtcttc	60
ccccacctcc	agctgatgct	cttctgctg	ttcctgctga	tgtacctgtt	cacgtgctg	120
ggcaacctgc	tcacatgggc	caccgtctgg	agcgagcgca	gcctccacac	gcccattgtac	180
ctcttctctg	gcgccccttc	cgtctccgag	atcctctaca	ccgtggccat	catcccgcgc	240
atgctggccg	acctgctgtc	cacccagcgc	tccatcgect	tcctggcctg	tgccagtcag	300
atgttctctt	ccttcagctt	cggttcacc	cactccttcc	tgtcacctgt	catgggtctac	360
gaccgctacg	tggccatctg	ccacccccctg	cgctacaacg	tgtcatgag	cccgcggggc	420
tgcgcctgcc	tgggtgggctg	ctcctgggct	ggtggcttgg	tcattgggat	ggtgggtgacc	480
tcggccattt	tccacctcgc	cttctgtgga	cacaaggaga	tccaccattt	tgtttgccat	540
gtgccacctc	tgttgaagtt	ggcctgtgga	gacgatgtgc	tgggtgtggc	caaaggcgtg	600
ggcttgggtg	gtatcacggc	cctgctgggc	tgtttcttcc	tcattcctct	ctcctatgcc	660
ttcatctggg	ccgcatctt	gaagatccct	tctgtggaag	gtcggaaaca	ggccttcttc	720
acctgtgcct	ctcacctcac	tgtgggtggtc	gtgcaactatg	gctttgcctc	cgtcatttac	780
ctgaagccca	aaagtcccca	gtctctggaa	ggagacacct	tgatgggcat	cacctacacg	840
gtcctcacac	ccttctcag	ccccatcatc	ttcagcctca	ggaacaagga	gctgaaggtc	900
gccatgaaga	agaccttctt	cagtaaactc	taccagaaaa	aaaatgta		948

<210> 861
 <211> 674
 <212> DNA
 <213> Unknown (H38g711 nucleotide)

<220>
 <223> Synthetic construct

<400> 861
 ttgcctgaca tcggtttcac ctccaccacg gtccccaaga tgattgtgga catccagtct 60
 cacagcagag tccctccta tgcgggctgc ctgatcagat gtctctcttt gccacttttg 120
 gaagcatgga agagaggcat gctcctgagt gtgatggcat atgaccgggt tgtagccatc 180
 tgtcacccctc tatatcgttc agccatcttg aaccctgat tctgtggctt cctagatttg 240
 ttgtctttgt tttttttgt ttgtttgttt tgtttttctc agtcttctag actcccagct 300
 gcacaacttg attgccttac aaatgacctg ctccaaggat gtggaaattc ctaatttctt 360
 ctgggaacct tctcarctcc cccatcttgc atgttgtgac accttcacca ggaacatcaa 420
 catgtatttc cctgctgccc tatttggttt tcttcccatc tcagggacct tttctcttac 480
 tgtaaaattc tttcctccat tctgagggtt tcatcatcag gtgggaagta taaaccttct 540
 ccacctgtgg gtctcacctg tcagttgttt gctgatttta tggaaacaggc gttggagggt 600
 acctcggttc agatgtgtca tcttccccga gaaagrgtgc agtggcctca gtgatgtaca 660
 ygggtgtcac cccc 674

<210> 862
 <211> 653
 <212> DNA
 <213> Unknown (H38g712 nucleotide)

<220>
 <223> Synthetic construct

<400> 862
 ttgcctgaca tcggtttcac ctccaccatg gtccccaaga tgattgtgga atccaatctc 60
 acagcagagt catctcctat gcaggccgcc tgactcagat gtctctcttt gccatttttg 120
 gaggcattgga agagagacat gctcctgagt gtgatggcct atgaccgggt tgtagccatc 180
 tgtcacccctc tatgtcatc agccatcacg aaccctgtgt tctgtggctt tctagttttg 240
 ttgtcttttt tttttctcag tcccttagac gccagctgc acaacttgat tgccttacaa 300
 aggacctgct tcaaggatgt ggaaattcct aatttcttct gtgaccttc tcaattcccc 360
 gtcttgcatg ttgtggcacc ttcaccaata acataatcat gtatttcctt gctgccatat 420
 ttggttttct tcccatctcg gggacccttt tctcttacga taaaattggt ttctccattc 480
 tgagggtttc atcatcagggt ggggaagcata aggccttctc caccaggggg tctcacctgt 540
 cagttgtttg ctgattttat ggaacaggcg ttggagagta cctcggttca gatgtgtcat 600
 cttccccgag aaagggtgca gtggcctcag tgatgtacac ggtggtcacc ccc 653

<210> 863
 <211> 648
 <212> DNA
 <213> Unknown (H38g713 nucleotide)

<220>
 <223> Synthetic construct

<400> 863
 ctggtggact ttggatactc ctcagctgtc actcccaagg tcatggctgg gttccttata 60
 gaagacaagg tcattctctta caatgcatgt gctgctcaaa tgtatatctt tgtagctttt 120
 gccactgtgg aaaattacct cttggcctca atggcctatg accgctatgc agcagtgtgc 180
 aaacccttac attacaccac aaccatgaca acaactgtgt gtgctcgtct ggccataggg 240
 tectacctct gtggtttcct gaatgcctcc atccacactg gggacacatt tagtctctct 300
 ttctgtaagt ccaatgaagt ccatcacttt ttctgtgata ttccagcagt catggttctc 360
 tcttgctctg atagacatat tagcgagctt gttcttattt atgttgtgag cttcaatatc 420
 tttatagctc tcttggttat cttgatatcc tacacattca tttttatcac catcctaaag 480


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atgcactcag cttcagtata ccagaagcct ttgtccacct gtgcctctca tttcattgca      540
gtcggcatct tctatgggac tattatcttc atgtacttac aaccagctc cagtcactcc      600
atggacacag acaaaatggc acctgtgttc tataacaatgg tcatcccc      648

```

<210> 864
 <211> 645
 <212> DNA
 <213> Unknown (H38g714 nucleotide)

<220>
 <223> Synthetic construct

```

<400> 864
attgttgaca tatcctatgc ttccaactat gtccccaaga tgctgacgaa tcttatgaac      60
caggaaagca ccatctcctt ttttccatgc ataatgcaga cattcttgta tttggctttt      120
gctcacgtag agtgtctgat tttgggtggt atgtccctatg atcgctatgc ggacatctgc      180
caccctttac gttacaatat cctcatgagc tggagagtgt gcactgtcct ggctgtggct      240
tcctgggtgt tcagcttcct cctggctctg gtccctttag ttctcatcct gaggtgccc      300
ttctgcgggc ctcatgaaat caaccacttc tgtgaaatcc tgtctgtcct caagttggcc      360
tgtgttgaca cctgggtcaa ccaggtggtc atctttgcag cctgcgtgtt catcctgggtg      420
gggccactct gcctgggtgt ggtctcctac ttgcgcaccc tggccgccat cttgaggatc      480
cagtcctggg agggccgcag aaaggccttc tccacctgct cctcccacct ttgcgtgggtg      540
ggactcttct ttggcagcgc cattgtcacg tacatggccc ccaagtcccc ccactctgag      600
gagcagcaga aagttctttc cctgttttac agccttttca atcca      645

```

<210> 865
 <211> 486
 <212> DNA
 <213> Unknown (H38g715 nucleotide)

<220>
 <223> Synthetic construct

```

<400> 865
gtggccatct gtaaaccctt tcattatgtg gtcacatga acaacagggt gtgtacctta      60
ttagttctct gctgttggtt ggctggcttg atgatcattg ttccaccact tagcttaggc      120
ctccagctcg aattctgtga ctccaatgcc attgatcatt ttagctgtga tgcaggctcct      180
ctcctaaaga tctcatgttc agatacatgg gtaatagaac agatgggttat acttatggct      240
gtatttgcac tcattatcac cccagtttgt gtgattctgt cctacttgta catagtcaga      300
acaattctga agttcccttc tgttcagcaa aggaaaaagg ccttttctac ctgttcaccc      360
cacatgattg tggtttccat tgccatgga agctgcacct tcacttatat caagccctct      420
gcaaaagatg aggtggccat aaataaagga gtttcagttc ttactacttc tgtcgaccc      480
ttgttg

```

<210> 866
 <211> 670
 <212> DNA
 <213> Unknown (H38g716 nucleotide)

<220>
 <223> Synthetic construct

<221> misc_feature
 <222> (1)...(670)
 <223> n = A,T,C or G

```

<400> 866
ttgcctgaca tcggtttcac ctccaccacg gtccccaaga tgattgtgga catccagtct      60
cacagcagag tcactctcta tgcaggctgc ctgactcaga tgtctctctt tgccattttt      120
ggaggcatgg aagagagaca tgctcctgag cgtgatggcc tacgaccagt ttgtagccat      180
ctgtcaccct ccatatcggt cagccatctt gaaccctgtt ttctgtgggt tccaagattt      240

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gttgteettg tntttttttc tttttttttt tttttctca ggcttttaga ctcccagctg      300
cataacttga ttgccttaca aatgacctgc ttcaaggatg tggaaatttc taatgtcttc      360
tgggaacctt ctcaactctc ccattcttga tgttggtgaca ccttcaccag gaacatcagt      420
atttccctgc tgccatattt ggtttttctc ccattctggg gaccttttc tcttactgta      480
aaattgtttc ctccattctg agggtttcat catcaggtgg gaagtataaa ccttctccac      540
ctgtgggtct cacctgtcag ttgtttgctg attttatgga acaggtgttg gagggtagct      600
cagttcagat gtgtcatctt ccctgagaaa ggctgcagtg gcctcagtga tgtacaagat      660
ggtcaccccc

```

<210> 867

<211> 654

<212> DNA

<213> Unknown (H38g717 nucleotide)

<220>

<223> Synthetic construct

<400> 867

```

ttggctgaca tgggtttcac ctccaacacg gtccccaaga tgattgtgga catccaatct      60
cacagcagag tcatctccta tgcaggctgc ctgactcaga tgtctctctt tgctgttttt      120
ggaggcatgg aagaaagaca tgctcctgag tgtgagggcc tatgaccggt ttgtagccat      180
ctgtcacctc ctatattatt cagccatcat gaacccatgt ttctgtggct tcctagtttt      240
gtgttttttt tttttctcag tcttttagac tcccagctgc acaatttgat tgccttataa      300
atgacctgca tcaaggatgt ggaaattcct aatttcttct gtgaccttcc tcaactcccc      360
catcttgcac gttgtgacac cttcaccatt aacatagtc tgtatttccc tgccgccata      420
tttggttttc ttcccatctc ggggacctt ttctcttact ctaaaattgt ttctctcatt      480
ctgagggttt catcatcagg tgggaagtat aaagccttct ccacctgtgg gtctcacctg      540
tcagttgttt gctgagttta tgggaacaggc gttggaggtt acctcagttc agatgtgtca      600
tcttcctga gaaaggctgc agtggcctca gtgatgtaca cggtggtcac cccc      654

```

<210> 868

<211> 882

<212> DNA

<213> Unknown (H38g718 nucleotide)

<220>

<223> Synthetic construct

<400> 868

```

ttgattttct tcttaatcta tccgcttata ctggtgggta atgaccagat cctggtgggt      60
gtgatggcag aggccagcct tcacaagcct gtgtacttct tcttgataaa cctctcagcc      120
ctagacatcc tctccactac agtcaactgt cccaagacgc tgcccctgtt cttgcttggg      180
gaccacttcc tcagcttccc tgctgtcttc ctacagatgt acctgttcca cagcttctcc      240
tgctcagaag ccttcatcct ggtgggtcat gcctatgacc gctatgtagc tatctgccac      300
ccactgcaat accctgttct catgaacca cagaccaatg ctgtcttggc aaccggtgcc      360
tggtcactg cctctctcct gccatttcca gcagtagtac agacctcca gatggcattt      420
gacagcattg ctgacatcta ccactgcttc tgtgatcatc tggctgtggg ccaggcctcc      480
tgctctgata ccacccccag accttcatgg gtttctgcat cgccatgggt gtgtccttcc      540
tcccccttct cctggtgctt ctctcctatg cccacatctt gacctcgggt cttcgcatta      600
actccaaga aggacgtccc aaagccttct ccacctgcag ctcccatctc ccggtagtgg      660
gcacctacta ctcatccatt gccatagcct atgtggccta cagcgctgac ctgcccctcg      720
acttccacgt catgggcaat gttgtacatg tcttcttctt cctcttcttc ttcttcttcc      780
tcttctctt cttctcttct ctcttctgt tcttcttctt cttcttctcc ttctcttcc      840
tcttctctt cttctcttct tcttcttct tcttcttctt tt      882

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<210> 869

<211> 934

<212> DNA

<213> Unknown (H38g719 nucleotide)

<220>

<223> Synthetic construct

<400> 869

```

atggagatgg aaaactgcac cagggtaaaa gaatttattt tccttggcct gaccagaat      60
cggaagtga gcttagtctt atttcttttc ctactcttgg tgtatgtgac aactttgctg      120
ggaaacctcc tcatcatggt cactgttacc tgtgaatctc gccttcacac gccatgtat      180
tttttgctcc ataatttatc tattgccgat atctgcttct cttccatcac agtgcccaag      240
gttctgggtg accttctgtc tgaaagaaa accatctcct tcaatcattg cttcactcag      300
atgtttctat tccaccttat tggaggggtg gatgtatttt ctctttcggg gatggcattg      360
gatcgatatg tggccatctc caagcccctg cactatgcga ctatcatgag tagagaccaa      420
tgcattgggc tcacagtggc tgccctgggtg gggggctttg tccactccat cgtgcagatt      480
tccctgttgc tcccactccc tttctgcgga cccaatgttc ttgacacttt ctactgtgat      540
gtccaccggg gtcctcaaat ggcccatata gacattttca tacttgaact actaatgatt      600
tccaacaatg gactgctcac cacactgtgg ttttctctgc tcctgggtgc ctacatagtc      660
atattatcat tacccaagtc tcaggcagga gagggcagga ggaaagccat ctccacctgc      720
acctcccaca tcactgtggt gacctgcat ttctgtgccc tgcattctat tctatgcccg      780
gcccttcaact gccctcccca tggataaggc catctctgtc accttcaactg tcatctcccc      840
tctgctcaac cccttgatct acactctgag gaaccatgag atgaagtcag ccatgaggag      900
actgaagaga agacttgtgc cttctgatat aaaa                                934

```

<210> 870

<211> 898

<212> DNA

<213> Unknown (H38g720 nucleotide)

<220>

<223> Synthetic construct

<400> 870

```

acaatgcagc aaaataacag tgtgcctgaa ttcatactgt taggattaac acaggatccc      60
ttgaggcaga aaatagtgtt tgtaatcttc ttaattttct atatgggaac tgtgggtggg      120
aatatgctca ttattgtgac catcaagtcc agccggacac taggaagccc catgtacttc      180
tttctatttt atttgtcctt tgcagattct tgcttttcaa cttccacagc cctagatta      240
attgtggatg ctctctctga aaagaaaatt ataacctaca atgagtgcac gacacaagtc      300
tttgactac atttatttgg ctgcatggag atctttgtcc tcattctcat ggctgttgat      360
cgctatgtgg ccatctgtaa gcccttgcgt taccacaacca tcatgagcca gcaggctctgc      420
atcactcctga ttgttcttgc ctggataggg tctttaatac actctacagc tcagattatc      480
ctggcccttaa gattgccttt ctgtggaccc tatttgattg atcattattg ctgtgatttg      540
cagcccttgt tgaaacttgc ctgcatggac acttacatga tcaacctgct gttgggtgtc      600
aacagtgggg caatttgtct aagtagtttc atgattttga taatttcata tattgtcatc      660
ttgcattcac tgagaaacca cagtgcacaa gggaagaaaa aggctctctc cgcttgacg      720
tctcacataa ttgtagtcat cttattcttt ggcccatgta tattcatata tacacgcccc      780
cggaccactt tccccatgga caagatgggt gcagtatttt atactatttg aacacccttt      840
ctcaatccac tcatctacac atctgaggaa tgcagaagtg aaaaatgcc a tgagaaag      898

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<210> 871

<211> 943

<212> DNA

<213> Unknown (H38g721 nucleotide)

<220>

<223> Synthetic construct

<400> 871

```

atggagttgg gaaatgtcac cagagtaaaa gaatttatat ttctgggact tactcaatcc      60
caagaccaga gtttgggtctt gtttcttttt ttatgtcttg tgtacatgac gactctgctg      120
ggaaacctcc tcatcatggt caccgtgacc tgtgagcttc gccttcacac ccccatgtac      180
ttcctgctcc gcaatctagc catccttgac atctgcttct cctccacaac tgctcctaaa      240
gtcttgcctg accttctgtc aaagaaaaag accatctcct atacaagctg catgacacag      300
atatttctct tccacctcct tgggtggggca gacatttttt ctctctctgt gatggcgttt      360
gactgctaca tggccatctc caagcccctg cactatgtga ccatcatgag tagagggcaa      420

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tgcaactgccc	tcattctctgc	ctcttgatg	gggggctttg	tccactccat	cgtgcagatc	480
tccctgttgc	tgccctctccc	tttctgtgga	cccaatgttc	ttgacacttt	ctactgcat	540
gtccccagg	tccctcaaact	cacttgcaact	gacacttttg	ctcttgagtt	cttgatgatt	600
tccaacaatg	gcctgggtcac	taccctgtgg	tttatcttcc	tgcttggtgc	ctacacagtc	660
atcctaata	gcctgaggtc	tcaggcagga	gggggcagga	ggaaagccat	ctccacttgc	720
acctccccac	atcactgtgg	tgacctgca	ttttgtgccc	tgcatctatg	tctatgcccc	780
gcccttcact	gccctcccca	cagaaaaggc	catctctgtc	accttcactg	tcattctccc	840
tctgctgaac	cctttgatct	acactctgag	gaaccaggaa	atgaagtcag	ccatgagaag	900
actgaagaga	agactcgtgc	cttctgaaag	ggaatagaaa	aca		943

<210> 872

<211> 942

<212> DNA

<213> Unknown (H38g722 nucleotide)

<220>

<223> Synthetic construct

<400> 872

atgctggggc	taaaccacac	ctccatgtct	gaattcatcc	tcgtcggctt	ctctgccttc	60
ccccacctcc	aactgatgct	cttctgtctg	ttctgtctga	tgtacctgtt	cacgctgctg	120
ggcaacctgc	tcatcatggc	caccgtctgg	agcgagcgca	gcctccacac	gcccattgtac	180
ctcttctctg	gcgtcctctc	agtctccgag	atcctctaca	ccgtggccat	catcccgcgc	240
atgctggccg	acctgctgtc	caccacagcg	tccatcgctt	tcctggcctg	tgccagtcag	300
atgttcttct	ccttcagctt	cggtttcacc	cactccttcc	tgctcaccgt	catgggctac	360
gaccgctacg	tggccatctg	ccacccccctg	cgctacaacg	tgctcatgag	cccacggggc	420
tgcgcctgcc	tggtgggctg	ctcctgggct	gggtggctcg	tcattggggat	ggtgggtgacc	480
tcggccattt	tccaactgac	tttctgtgga	tcccatgaga	tccagcattt	tttatgtcat	540
gtgccacctc	tgttgaagtt	ggcctgtgga	aataatgtac	cagctgtggc	cctgggctgt	600
ggcttggtat	gtatcatggc	actgctgggc	tgttttctcc	tcattcctct	ctcctatgcc	660
ttcatcgtgg	cgcacatctt	gaagatccct	tctgctgaag	gtcggaaaca	ggccttctcc	720
acctgtgcct	ctcaccttat	tgtggctcatt	gtgcactatg	gctttgcctc	tgctatctac	780
ctcaagccca	aaggtcccca	ctctcaggag	gggtgacacc	tgatggccac	cacctacgca	840
gtcctcagc	ccttctcag	ccccatcctc	ttcagcctca	ggaacaaaga	actgaagggt	900
gccatgaaga	ggaccttctt	cagcacactc	tattcctcag	gc		942

<210> 873

<211> 948

<212> DNA

<213> Unknown (H38g723 nucleotide)

<220>

<223> Synthetic construct

<400> 873

atgcctgggc	agaactacag	aaccatatct	gaatttatcc	tctctggctt	ctcagccttc	60
ccccagcagc	tcctgcctgt	cttgttctctg	ctgtacctcc	tgatgttctt	gttcacattg	120
cttggcaacc	ttcttatcat	ggccacagtt	tggattgaac	gcagactcca	cacacccatg	180
tacctcttct	tgtgtgccct	ctccatctct	gagattctgt	tcactgttgc	catcacccct	240
cgcattgctg	ctgatctgct	cttcacccat	cggtccatca	cctttgtggc	ttgtgccatt	300
cagatgttct	tctccttcat	gtttggcttc	actcactcct	tccttctcat	ggtcatgggc	360
tatgatcact	acgtgacat	ctgccaccca	ctgcattaca	acatgcta	gagtcctcgt	420
ggctgtgccc	atcttgtggc	ctggacctgg	gctgggtggc	cggtcattgg	gatgatgggtg	480
acaatgatgg	tttttcacct	cactttctgt	gggtctaattg	tgatccacca	ttttctctgt	540
catgtgcttt	ccctcttgaa	gttggcctgt	gggagcaaga	catcatctgt	catcatgggt	600
gtgatgctgg	tgtgtgtcac	agccctgata	ggctgtttgt	tcctcatcat	cctctccttt	660
gtcttcattg	tggtgccat	cttgaggatt	ccttctgctg	agggccggca	caagactttc	720
tccacttggtg	tatccacat	cactgtggtg	gtcatgcact	atagttttgc	ctcccttata	780
tacctcaaac	ccaaggccct	ccattctatg	tacagtgatg	ccttgatggc	caccacctat	840
actgtcttca	cccccttctt	cagcccaatc	attttcagtc	taaggaacaa	ggagctgaag	900
aatgccataa	ataaaaactt	ttgcagaagg	ttctgccctc	taagctcc		948

<210> 874
 <211> 484
 <212> DNA
 <213> Unknown (H38g724 nucleotide)

<220>
 <223> Synthetic construct

<400> 874
 ggatggaaat acaagcacct tcaacatctc ctgcaccaag ttcttcctgg tgggtttccc 60
 tggacttcga gagtggtggc cccttctggt cctgcctctt gtcttcctct ttgtgaccat 120
 catctctgcc aatgccctgg tcatccacac agtggttgcc cggcaaaatc tgcacagcc 180
 tacgtgtatg ctcatcactg tgcctctggc tgtcaatatt cgtgctgcca cagccgtgat 240
 gcctaaaatg ctggagggct ttgtatatta tgctaacccc atatcgctgc atggccgcct 300
 ggcctagggtg ttctttatct acttcaccct cctcctggac tacaacttcc tctggccctg 360
 gccctggact gggtactttg ccactctgcca cccactctgc ttttctgacc tgatgacctc 420
 ccagctgctg ggactgctgg ccattcttgc ctttgaacaa agccctggga gtgaccccgcc 480
 ccct 484

<210> 875
 <211> 595
 <212> DNA
 <213> Unknown (H38g725 nucleotide)

<220>
 <223> Synthetic construct

<400> 875
 gtagccaat ggccaccctc tctgttttca aactgaatga cttcccagct ggctgggatt 60
 gctggccatt cttgccttga cacagagctg gggagtgaac gtgcctttgg tagtactaac 120
 tgcaaaagcc gattttctgcc ggacagcagt gattcgacac ttcacctgtg agtgcatgtc 180
 actgctgagc atagcttctg gagacctgac cttcaacaac tggctggggc tggctatgtg 240
 tttggctact gtaatctctg atatggccct gctggggacc tctacacccc acatcatcta 300
 tgcctccttc cggatctctt cttggggagc ccaagccaag gccttacaca cgtgtggctc 360
 ccactactg gtcacccctc ccactacgt ctctggctct tccacttcca tcacttctg 420
 agtagccaag actgtgtccc agaattgtcca gaatctactc agtgccatat acttgctgct 480
 tccaggagcc ttgaatctctg tcatttatgg ggtgaggact agggagatcc agcaacatgt 540
 agaaaagatg ctctgtgaaa aggaaacagc ccagaaggct ggggagaagc caaag 595

<210> 876
 <211> 944
 <212> DNA
 <213> Unknown (H38g726 nucleotide)

<220>
 <223> Synthetic construct

<400> 876
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ggacctatgc	tagcatcatt	ggtctcttct	acacacctgc	cctcttctcc	ttccttgctc	780
actgttttgg	gtgtcacaca	gtgcccacc	atattcacat	cctactggct	aacctctacg	840
cagtgggtgt	cccagctttc	aatcctgtgg	tctatggagt	gcagactcag	cagagctcag	900
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<210> 877

<211> 939

<212> DNA

<213> Unknown (H38g727 nucleotide)

<220>

<223> Synthetic construct

<400> 877

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ggcaatgtgt	ccatcatgat	ggtgtgcatt	ctggatccca	aacttcatac	tcccatgtat	180
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ctcatcatct	tcctggccct	agggtctaca	gagtgctccc	ttctggctgt	tatgtccttt	360
gacagatatg	tggctgtttg	cagacccctc	cactatgtag	tcatcatgaa	ttattggttc	420
tgcctaagga	tggcagcctt	ctcatggctc	attggtttcg	gcaactcagt	gctgcagtct	480
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caaccacctt	catccacctc	taaggactgg	ggaaagatgg	tttccctctt	ctatggaatc	840
atcacatcca	tgttgaactc	cctcatctac	agccttagaa	ataaagatat	gaaggaggcc	900
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<210> 878

<211> 968

<212> DNA

<213> Unknown (H38g728 nucleotide)

<220>

<223> Synthetic construct

<400> 878

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gcagggaatg	tcatecttct	ctaccttacc	actgtggaac	acaacctcca	taaaccctatg	180
ttttccttcc	tctctatacc	ggcctctgca	aacctcatat	tatgcattac	atatttcccc	240
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agggtttttt	tttttggtct	acttcaactt	agcttttttt	ctggacttgg	ccatcttgtt	360
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gacacctcaa	cacttggcaa	gattgtgggt	agcattgatt	gaagggttaa	taacattttg	480
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tactgtgagc	acataggtgt	ggccttgctt	tcctatgctg	atatctccat	caatatctgg	600
tatgacttta	ctatattggg	aatgactatt	atctcagatc	tgatcctcac	tgatatttcc	660
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ggcctctata	gggcaatccc	tcctgtactc	aattccataa	ttatggagta	aaaacaaagc	900
agattggaaa	caaggtcata	cttttattct	ttcttaaagg	gatgcagtga	tatgaggatg	960
agaatatg						968

<210> 879

<211> 1011

<212> DNA

<213> Unknown (H38g729 nucleotide)

<220>

<223> Synthetic construct

<400> 879

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aacctgttca	tcatcatcct	gtcatacctg	gactcccatc	tccacactcc	catgtacttc	180
ttcctttcaa	atctctcatt	tctggatctc	tgctacacca	ccagctctat	ccctcagttg	240
ctggtgaatc	tctggggccc	ggaaaagacc	atctcttatg	ctggttgtag	agttcaactt	300
tactttgttc	tcgcactggg	aaccgcagag	tgtgtcctac	tggtgggtgat	gtcctatgat	360
cgttatgcag	ctgtgtgtag	acctttgcat	tacactgtcc	tcatgcaccc	tcgtttctgc	420
cgcttggtgg	ctgcggcttc	ttgggtaagt	ggttttacaa	cctcagcact	tcattcctcc	480
tttactttct	ggataccctt	atgtagacat	cgcctagtgg	atcacttctt	ctgtgaagct	540
ccagcacttc	tcgcattatc	atgtgttgat	acctaggcaa	atgagctgac	cctcatggtc	600
atgagctcca	tttttggtct	catacctctc	atcctcatcc	tcacttccta	tggtgccatt	660
gccccgggctg	tactgagcat	gcaatcaacc	actgggcttc	agaaaagtgc	taggacatgt	720
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aagagactaa	tgggggtggga	atgggggatg	tgacagggaa	atcatgttgg	ctgttggttt	960
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<210> 880

<211> 956

<212> DNA

<213> Unknown (H38g730 nucleotide)

<220>

<223> Synthetic construct

<400> 880

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ggacttgagc	agtaccacgt	ctggatcagc	atcccattct	gcttaatcta	tctcatggct	120
gtcgtggcca	agagtatcct	tctctacctc	attgtggtag	agcacagtct	tcatgcaccc	180
atgttctttt	tcctttccat	gtcggccatt	actgatctca	tattgtccac	cacatgtgtc	240
cccaaaaacac	ttagcatctt	ctgggttggt	ccccaaacag	tttccctggc	tgtctcaccc	300
aattattctt	tctgcactat	agctttgtgt	tggactcagc	tatactgctg	gccatggcat	360
ttgaccgcta	tatggccatt	tgtccacctc	tgagatacac	tactattctg	actcccaaaa	420
ccattgtcaa	aattgctgtg	ggaatatgtt	tccgaagttt	ctgtgttttt	gtcccggtg	480
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tcatgctctg	tggtgtcttt	tgccctccct	cccaagatgc	ccgtcagaag	gccctttgct	720
cctgtgggtc	ccatgtctgt	gttatectca	tattctatac	accagcattc	ttctccatcc	780
ttgcccatcg	ctttgggcat	aatgtccctc	atacctttca	tattatgttt	gccaaccttt	840
atgtaatcat	tccacctgct	ctcaacccta	ttgtctacag	aataaagacc	aagcaaatcc	900
agaacagaat	ccttttgctc	tttcccaagg	ggtccagtg	ataggtgcct	gagctc	956

<210> 881

<211> 933

<212> DNA

<213> Unknown (H38g731 nucleotide)

<220>

<223> Synthetic construct

<400> 881

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acactgatag	gaaacctgtt	catcatcatc	ctgtcatacc	tggactccca	tctgcacaca	180
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atccctcagt	tgctgggtcaa	tctctggggc	ccggaaaaga	ccatctctta	tgctgggtgc	300
atgattcaac	tttactttgt	tctcgcaactg	ggaaccacag	agtgtgtcct	actggtggtg	360
atgtcctatg	accgttatgc	agctgtgtgt	agacctttgc	attacactgt	cctcatgcac	420
cctcgtttct	gccacctgct	ggctgtggct	tcttgggtaa	gtggttttac	caactcagca	480
cttcattcct	ccttcacctt	ctgggtacct	ctgtgtggac	accgccaagt	agatcacttt	540
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accctcatga	tcacaagctc	catatttgtt	ctcatacctc	tcaccccat	tctcacttct	660
tatggtgcc	tcgtccgagc	tgtactgagg	atgcagtcaa	ccactgggct	tcagaaagtg	720
tttggaaacat	gtggagctca	tcttatggct	gtatctctct	ttttcattcc	ggccatgtgc	780
atatactctc	agccaccatc	aggaaattct	caagatcaag	gcaagttcat	tgccctcttt	840
tatactgttg	tcacacctag	tcttaaccct	ctaactctaca	ccctcagaaa	caaagttgta	900
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<210> 882

<211> 264

<212> DNA

<213> Unknown (H38g732 nucleotide)

<220>

<223> Synthetic construct

<400> 882

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catattggca	tcgtagctgg	ggtacgggga	tccctctttt	tttccccact	ggctctgctg	180
ataaagacgc	tgggcttatg	ccactcctat	gtgctctcgc	actcctatcc	gctccaccag	240
gatgtagcga	acttgtccta	tgcg				264

<210> 883

<211> 477

<212> DNA

<213> Unknown (H38g733 nucleotide)

<220>

<223> Synthetic construct

<400> 883

gttgccatct	gtaacccttt	gcgctacctt	acagtcatga	acccccagct	atgcctttgg	60
ttggttcttg	cctgctggtg	tgggggtttt	atccactcta	tcattgcagg	catactagtc	120
atccagctgc	ctttctgttg	gccaatgaa	ctggacaact	tctactgtga	tgctctacaa	180
atcatcaagc	tggcctgcat	ggacacctat	gtggtagagg	tgctgggtgat	agccaacagt	240
ggctctgctg	ctcttgtctg	cttcttggtc	ttactattct	cttatgctat	catcctgatc	300
accctgagaa	cacgcttctg	ccagggccag	aacaaggctc	tctctacctg	tgcttctcac	360
ctgacagtgg	tcagcctgat	cttcgtgcc	tgcgtattca	tctatttgag	gcctttctgc	420
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<210> 884

<211> 948

<212> DNA

<213> Unknown (H38g734 nucleotide)

<220>

<223> Synthetic construct

<400> 884

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ggcctgaagg	agctgcacgt	gtggatctcc	atcccttctt	gtctgatgta	cctggtggct	120
gtgtcaggaa	atggtctcct	tgtctgtgtg	gtggcagtg	agcacagtct	tcatgaacct	180
atgtaccttt	tcctctccat	gctggcattt	tgggatctga	ttctatccac	atctgcagta	240


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cccaaagcct tgagcatttt ctggtttgat gatgtggaca tctcctttgg tggctgtgtc 300
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<210> 885

<211> 1087

<212> DNA

<213> Unknown (H38g735 nucleotide)

<220>

<223> Synthetic construct

<400> 885

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ggaaacatca caatcattct catgtccagg ttagactctc gtcttcatag ccccatgtac 180
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ctttatttct ttcacataat ggggggaaca gaatgtttgc ttttggctat tatgtccttt 360
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tcagcaa 1087

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<210> 886

<211> 498

<212> DNA

<213> Unknown (H38g736 nucleotide)

<220>

<223> Synthetic construct

<400> 886

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cagattggca tcgtggctgt ggtcccgga tccctctttt ttttccact gcctctgtctg 180
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cgaacggttc tgcaactgcc ttccaagtca tagcgggcca aggcctttgg aacctgtgta 420
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cggtttggga acaaaactt

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<210> 887
 <211> 936
 <212> DNA
 <213> Unknown (H38g737 nucleotide)

<220>
 <223> Synthetic construct

<400> 887
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 acaggaaacc tgttcatcat catcctgtca tacgtggact cccatctcca cacaccaatg 180
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 gcagcgaaga gactattggg gtgggagtgg ggggag 936

<210> 888
 <211> 453
 <212> DNA
 <213> Unknown (H38g738 nucleotide)

<220>
 <223> Synthetic construct

<400> 888
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 aagctggcct gcggaggcga cggagacact accgagaacc agatgttcgc cgcccgcgtg 120
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 cgctacaacc aggcacgggg caagttcgta tcgctcttct acaccgtggt cacacctgct 360
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 ctgcggagtc ttgggagagg ccaggctggg cag 453

<210> 889
 <211> 1014
 <212> DNA
 <213> Unknown (H38g739 nucleotide)

<220>
 <223> Synthetic construct

<400> 889
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 ctggaagtag ttctctttgt ggttattttg atcttctgct tgatgacact gataggaaac 120
 ctgttcatca tcatcctgac gtacctggac tccatctcc atactccctt gtatttcttc 180
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cctagtctta	accctctaata	ctacaccctc	agaaacaaag	atgtaagagg	ggtagtgaag	900
agactaaggg	ggtgggagtg	agcctgtgtt	tgtgtgatat	taacaatata	atggagtctt	960
tcctcacaat	gattcatcca	tctgttcatt	tatcaacat	tcttttatct	actc	1014

<210> 890

<211> 656

<212> DNA

<213> Unknown (H38g740 nucleotide)

<220>

<223> Synthetic construct

<400> 890

ttgcctgaca	tcggtttcac	ctccaccacg	gtccccaaga	tgattgtgga	catccaatct	60
cacagcagag	tcatctccta	tgcaggctgc	ctgactcaga	tgtctctctt	tgccattttt	120
ggaggcatgg	aagacagaca	tactcctgag	tgtgatggcc	tatgaccagt	ttgtagccaa	180
atgtcaccct	ctatatcatt	cagccatcat	gaaccctgtg	tctgtggctt	tctacttttg	240
ttgtcttttt	ttttccctc	agtcttttag	atgccagct	gtacaatttg	attgccttac	300
aatgacctg	ctcaaggat	gtggaaattc	ctaatttctt	ctgtgaccct	tctcaactcc	360
cccactctgc	atgttgtgac	accttcaaca	ataacataat	cctgtatttc	cctgatgcca	420
tatttggttt	tcttcccatc	tcggggacac	ttttctctta	cgataaaatt	gtttccctcca	480
ttctgagggt	ttcatcgtea	ggtgggaggt	ataaagccct	ctccacctgt	gggtctcacg	540
tgtcagttgt	ttgtgagtt	tatggaacag	gcgttggagg	gtacctcagt	tcggatgtgt	600
cattttcccc	cagaaagggt	gcagtggcct	cagtgatgta	cgcggttgct	accccc	656

<210> 891

<211> 971

<212> DNA

<213> Unknown (H38g741 nucleotide)

<220>

<223> Synthetic construct

<400> 891

atgattataa	tttgaatga	cagccacagt	gatttcatcc	ttctgggctt	ctctaacaag	60
ccacatttgg	agaagatact	ttttggatca	tttttatttt	ttattttttg	actcttgacg	120
gaaatatggg	catagttctt	gtgtccttga	aggatccaaa	actccacatc	cctatgtatt	180
tctttctttc	caacctttcc	ttggtagacc	tctgtttgac	cagcagctgt	gttccacaga	240
tggtgattaa	cttctggggc	ccagaaaaga	ccatcagcta	cattggctgt	gccattcaac	300
tctatgtttt	tttgtggctt	ggggccacgg	aatatgtcct	tcttgttgct	atggctgtgg	360
attgttatgt	agcagtgtgt	catccactgc	aaaataccat	gatcatgcac	ccaaaacttt	420
gtctgcagct	ggctatcttg	gcatggggga	ctggcttgge	ccagtctctg	atccagtcct	480
ctgccaccct	ccggttaccc	ttctgtctcc	agcggatggt	ggatgatgtt	gtttgtgaag	540
tcccagctct	gattcagctc	tccagtactg	atactaccta	cagtgaattt	cagatgtcta	600
tcgccagtgt	tgctctcttg	gtgatgccct	tgatcattat	cctttcctct	tctgggtgcta	660
ttgctaaggg	tgtgctgaga	attaagtcaa	ctgcaggaca	gaagaaagca	tttggcacct	720
gcactctctc	ccttcttctg	gtttctctct	tttatggcac	tgtcacaggt	gtctaccttc	780
aacccaaaaa	tactatcctt	catgaatggg	gcaattttct	cactcttttc	tacactgtag	840
taaccccaac	tcttaatccc	ctcatctaca	ctctaaggaa	caaggaggta	aagggagcac	900
taataagatt	ggggaggagg	acctgggatt	cccagaataa	ctaacaaggt	taacatatgt	960
ttacctttgc	t					971

<210> 892

<211> 651

<212> DNA

<213> Unknown (H38g742 nucleotide)

<220>

<223> Synthetic construct

<400> 892

ttgcctgaca	ttggtttcac	cttggccacg	gtccccaaga	tgatggagac	atgcaatcac	60
atagcagagt	catctcccat	gcaggctgtc	tgacacagat	acctttcttt	gtcctttttg	120
tatgtataga	tgacatgctc	ctgactgtga	tgacctataa	ctgatttgtg	gccatctgtc	180
acccccctgca	ctacccagtc	atcatgaatc	ctcacctctg	tgtcttctta	gttttgggtg	240
cctttttcct	tagcctgttg	gattcccagc	tgcacagctg	gatttgtgta	cacaactcac	300
cttcttcaag	aatgtggaaa	tctataatth	tttttctgtg	acccatctca	acttctcaac	360
cttgcctgtt	ctgacagcat	catcaataac	atattatgta	ttttagatat	ccctatatth	420
ggttttcttc	ccatttcagg	gatccttttg	tcttactata	aaattgtctc	ctccattcca	480
agaattccat	cgtcagatgg	gaagtataaa	gccttctcca	cctgtggctc	tcacctggca	540
gttggttgct	tattttatgg	aacagggtct	gtagggtacc	tcagttcagc	tgtgttacca	600
tccccagga	agagtatgg	ggcttcagtg	atgtacactg	tggtcacccc	c	651

<210> 893

<211> 373

<212> DNA

<213> Unknown (H38g743 nucleotide)

<220>

<223> Synthetic construct

<221> misc_feature

<222> (1)...(373)

<223> n = A,T,C or G

<400> 893

ttcctccttt	aggccaactt	acagcgcaga	ggagcgtttt	ctcctgctgg	gtttctccga	60
ctggccttcc	ctgcagccgg	tectcttcgc	ccttgctctc	ctgtgctacc	tcttgacctt	120
gacgggcaat	tcgggcgctg	gtgctgcttg	gcngngnngg	acccacgcct	gcanaacnac	180
gatgtatgna	ctacttcctc	tgccacctgg	ccttggtaga	cgcgggcttc	actactagcg	240
tggtgcgcgc	gctgctggcc	aacctgcgcg	gaccagcgct	gctntgncgc	gcagccactg	300
cacggcccca	gctgtgcgca	tcgctggctc	tgggttcggc	cgaatgcgct	ctctggcggt	360
gatggctctg	gan					373

<210> 894

<211> 648

<212> DNA

<213> Unknown (H38g744 nucleotide)

<220>

<223> Synthetic construct

<400> 894

atattagaaa	tttcgttcac	aaccgtcagt	atacccaagt	ttctgggtaa	cattattttca	60
ggagataaaa	ccatttcctt	taataattgc	atagttcagt	tatttttctt	catttctcttg	120
ggagtcacag	agttttacct	tctggctgcc	atgtcctatg	accgctatgt	ggccatctgc	180
aagcctctgc	attacttgag	tatcatgaat	cgaagagtct	gcacactgct	tgtttttact	240
tcttggctgg	tttcattctt	aatcatattc	ccagcactca	tgttgctttt	aaagcttgat	300
tactgtagg	ctaataattt	tgaccatttt	acctgtgatt	attttccact	gctgcaactt	360
gcttggtcag	acacaaaatt	cttagagg	atgggatttt	cttgtgctgc	gtttactcta	420
atgttcactt	tgccattaat	atttctgtcc	tacataaca	ttatcagaac	aattttgaga	480
attccttcta	ctagtcagag	gacaaaggcc	ttttccacat	gttcttccca	catgggtgtt	540
atctccatct	cttatggcag	ctgcattttt	atgtacatta	aaccctcagc	aaaagataga	600
gtgtccttga	gcaagggagt	ggcaatacta	aacacctcag	tagcccc		648

<210> 895

<211> 659
 <212> DNA
 <213> Unknown (H38g745 nucleotide)

<220>
 <223> Synthetic construct

<400> 895
 tttcctgaca tcggtttcac ctccaccaca gtccccaaga tgattgtgga catccagtct 60
 cacagcagag tcatctccta tgcaggctgc ctgactcaga tgtctctctt tgccattttt 120
 ggaggcatgg aagagagaca tgctcctgag tgtgatggcc tatgaccggg ttgtagccat 180
 ctgtcacccct ctatatcgct cagccatctt gaaccctgtg ttctgtggct tcctagattt 240
 gttgtctttt ttttttttcc ctccagtctt tagactccca gctgcacaac ttgattgcct 300
 tacaaatgac ctgcttcaag gatgtggaaa ttcttaattt cttctgtgac ccttctcaac 360
 tccccatctt tgcattgtgt gacaccttca ccaataacat aatcatgtat ttccctgctg 420
 ccatatttgg ttttcttcag atctcgggga cccttttctc ttactataaa attgtttcct 480
 ccattctgag ggtttcatca tcagggtggga actataaagc cttctccacc tgtgggtctc 540
 acctgtcagt tgtttgctga ttttatggaa caggcgttgg aggggtacctc agttcagatg 600
 tgtcatcttc cctgagaaaag gctgcagtgg cctcagtgat gtacatggtg gtcacaccc 659

<210> 896
 <211> 804
 <212> DNA
 <213> Unknown (H38g746 nucleotide)

<220>
 <223> Synthetic construct

<400> 896
 atgatggcac tcatcttcac agactcccat ctccaaagcc caatgtattt ctccctcaat 60
 gtccctctgt ttcttgatat ttgttactct tctgtgggtca cacctaagct cttgggtcaac 120
 ttcttggtct ctgacaagtc catctctttt gagggtgtg tgggtccagct cgccttctt 180
 gtagtgcatt tgacagctga gagcttctct ctggcctcca tggcctatga ccgcttctta 240
 gccatctgtc aacccttcca ttatggttct atcatgacca gggggacctg tctccagctg 300
 gtagctgtgt cctatgcatt tgggtggagcc aactccgcta tccagactgg aaatgtcttt 360
 gccctgcctt tctgtgggcc caaccagcta acacactact actgtgacat accaccctt 420
 ctccacctgg cttgtgcca caacagccaca gcaagagtgg tctctctatgt cttttctgct 480
 ctggtcaccc ttctgcctgc tgcagtcatt ctccctctct actgcttggg cttgggtggcc 540
 attgggagga tgcgtcagc agcagggagg gagaaggacc tctccacttg tgcctccac 600
 tttctggcca ttgccatttt ctatggcacc gtgggttttca cctatgttca gccccatgga 660
 tctactaaca ataccaatgg ccaagtagtg tccgtcttct acaccatcat aattcccatg 720
 ctcaatccct tcatctatag cctccgcaac aaggaggtga agggcgctct gcagaggaag 780
 cttcaggtca acatctttcc cggc 804

<210> 897
 <211> 949
 <212> DNA
 <213> Unknown (H38g747 nucleotide)

<220>
 <223> Synthetic construct

<400> 897
 atggacttgg gaaatcaaac aagagtttca gaatttttac tcttgggatt ttcccaagac 60
 ctagaggatc aacagttgct ctttgcactg tttctgtcca tgtacctggg caccgttctg 120
 gggaacctgc tcatcatcct ggccatcagc tctgactccc acctccacac ccccaggtag 180
 ttcttctct ccaatctgtc cctggctgac atcggtttca cctccaccgc agtccccaa 240
 atgctgggtg acatccagg gcagagcaat gccatcagct atgcagactg catcgccag 300
 atgtatgttt ttcatgggtt ttggaggcat ggacacattt ctctcaccg tgatggccta 360
 tgaccgggat gtggccatct gtcacccctt gtactactgt gtcaccagga acccctgcct 420
 ctgtggcctg ctggttcttg tgtcctgggt cctcagcttg tcatactccc tgatccagag 480

tctgttggtg	ctgcggtgt	ccttctgcac	cagttgagtc	attcagcact	tttactgtga	540
gcttgctcag	gtcctcagge	ttacctgctc	agacacacat	gtcaattaca	tcctgctcta	600
cgtgggtggc	ggccttcttg	actttgtgcc	cttctcaggg	atccttttct	cctacaccca	660
aattgtctcc	tacatcctga	gaatctcatc	cacagatggg	aaacacaaag	ccttttctac	720
ctgtggatct	catctgtttg	tggtttcttt	attctatggg	acaggccttg	gtgtgtatct	780
tagttccaat	gcctcgtcct	cttcctgggtg	gggcatgggtg	gcctcgggtca	tgtacactgt	840
ggtcaccccc	atgctgaacc	ccttcatcta	ttgcttgctg	aacagggaca	tcaagaggac	900
cctagaaaca	ctgcttggtg	gaatgctgta	tgctcaatga	cggggacat		949

<210> 898

<211> 927

<212> DNA

<213> Unknown (H38g748 nucleotide)

<220>

<223> Synthetic construct

<400> 898

atggagaatt	gtacggaagt	gacaaagttc	attcttctag	gactaaccag	tgtcccagaa	60
ctacagatcc	cctcttttat	cttgttcacc	ttcatctacc	tcctcactct	gtgtgggaac	120
ctggggatga	tgttgctgat	cctgatggac	tcttgtctcc	acaccccat	gtacttttct	180
ctcagtaacc	tgtctctggt	ggacttttga	tactcctcag	ctgtcactcc	caagggtcatg	240
gctgggttcc	ttagaggaga	caaggctcatc	tcctacaatg	catgtgctgt	tcagatgttc	300
ttctttgtag	ccttggccac	ggtggaaaat	tacttgttgg	cctcaatggc	ctatgaccgc	360
tatgcagcag	tgtgcaaacc	cctacactac	accaccacca	tgacggccag	tgtaggtgcc	420
tgtctggccc	taggtccta	tgtctgtggc	ttcctaaatg	cctcattcca	cattgggggc	480
atatcagtc	tctctttctg	taaatccaat	ctgggtacatc	actttttctg	tgatgttcca	540
gcagtcattg	ctctgtcttg	ctctgataaa	cacactagtg	aggtgattct	ggtttttacg	600
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atcaccatct	tgaagatgca	ttcagctaag	ggacacaaaa	aagcattgtc	cacctgtgcc	720
tctcacttca	ctgcagtctc	cgtcttctat	gggacagtaa	tcttcatcta	cttgcagccc	780
agctccagcc	actccatgga	cacagacaaa	atggcatctg	tgttctatgc	tatgatcatc	840
cccattgctga	accctgtggt	ctacagcctg	aggaacagag	aagtccagaa	tgcattcaag	900
aaagtgttga	gaaggcaaaa	atttcta				927

<210> 899

<211> 938

<212> DNA

<213> Unknown (H38g749 nucleotide)

<220>

<223> Synthetic construct

<400> 899

atgcacacca	tgggtggagaa	ccacacccaa	gtcacctggt	tccgcctgct	gggacttaca	60
gagcaggagg	agctcagagg	catcctcttt	gtgctcttcc	tgctcatgca	ttcagtcact	120
gttatgggca	acctgggaat	gatcactctg	atccatgcag	accacagct	ccacaccccc	180
atgtatttct	tcctgagcgt	cctatccttc	atagactcct	cgttttccac	agtggacacc	240
cccaggetgc	tggagagctt	cctcatctca	agccaatcca	tctcctttgc	aggctgtatg	300
gtccagatgg	ccctcatgat	cctccatggt	actgetgagt	gtctgctcct	ggccatcatg	360
gcctatgacc	gattcaccgc	catctgccac	cctctcctct	atcacactat	tatatcccaa	420
tgtctgtgtg	ccctgctggt	ggtgacctgc	tatactgttt	ctgttgccaa	ttcagctttg	480
ctgactgggt	gcactcttaa	gctgccctac	tgtggcccca	atgtcattaa	ccactatttc	540
tgtgacatcc	ccctgtgct	ccaacttgcc	ggtgcagata	ctacgaggtt	gagaccatta	600
tcttctcatt	gctgaccttg	ctcatcctct	ttaccatcac	cattatccca	gtctcctatg	660
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ccacctgtgc	ctccacctc	accatcatct	gcctcttcta	tagcaccatc	accttcatgt	780
atgctcagcc	aagctctcac	aattccatgg	aacacaacaa	ggctcatgtct	gtcttctaca	840
ctgtggatcat	cgcaggetg	aaccctctga	tctacagcct	gaggaataaa	gatgtaaaat	900
atgctttgaa	gaggagatgc	ctgtgcaagc	tgtcttca			938

<210> 900
 <211> 942
 <212> DNA
 <213> Unknown (H38g750 nucleotide)

<220>
 <223> Synthetic construct

<400> 900
 atggaaaata agacagaagt aacacaattc attcttctag gactaaccac tgactcagaa 60
 ctgcagggtc ccctctttat aacgttcccc ttcattctata ttatcactct gggtggaaac 120
 ctgggaatta ttgtattgat attctgggat tcctgtctcc acaatcccat gtactttttt 180
 ctcaagtaac tgtctctagt ggacttttgc tactcttcag ctgtcactcc catcgtcacg 240
 gctggattcc ttatagaaga caaggctcatc tcttacaatg catgtgctgc tcaaatgtat 300
 atctttgtag cttttgccac tgtggaaaat tacctcttgg cctcaatggc ctatgaccgc 360
 tatgcagcag tgtgcaaacc cctacattac accacaacca tgacaacaac tgtgtgtgct 420
 cgtctggcca taggctccta cctctgtggt ttctgaatg cctccatcca cactggggac 480
 acatttagtc tctctttctg taagtccaat gaagtccatc actttttctg tgatattcca 540
 gcagtcattg ttctctcttg ctctgataga catattagcg agcttgttct tatttatgtt 600
 gtgagcttca atattcttat agctctcctg gtatatctga tatcctacac attcattttt 660
 atcaccatcc taaagatgca ctcaagcttca gtataaccaga agcctttgtc cacctgtgcc 720
 tctcatttca ttgcagtcgg catcttctat gggactatta tcttcatgta cttacaaccc 780
 agctccagtc actccatgga cacagacaaa atggcacctg tgttctatac aatgggtcatc 840
 cccatgctga accctctggt ctatagtctg aggaacaagg aagtgaagag tgcattcaag 900
 aaagttgttg agaaggcaaa attgtctgta ggatgggtcag tt 942

<210> 901
 <211> 936
 <212> DNA
 <213> Unknown (H38g751 nucleotide)

<220>
 <223> Synthetic construct

<400> 901
 atgaacaact ctgacactcg catagcaggc tgcttcctca ctggcatccc tgggctggag 60
 caactacata tetggctgtc catcccttc tgcattcatg acatcgctgc cctggaaggc 120
 aatggcatcc taatttgtgt catcctctcc caggcaatcc tgcattgagc catgtacata 180
 ttcttatcta tgcaggccag tgctgatgtc ttgtctctca ccaccaccat gcctaaggcc 240
 ctggccaatt tgggcttagg ttatagccac atttctcttg atggctgcct cactcaaaag 300
 ttcttcattc acttctctct cattcactct gctgtcctgc tggccatggc ctttgaccgc 360
 tatgtggcca tctgctcccc cctgcgatat gtcacaatcc tcacaagcaa ggatcattggg 420
 aagatcgta ctgccaccct gagccgcagc ttcattcata tgtttccatc catctttctc 480
 cttgagcacc tgcactattg ccagatcaac atcattgcac acacattttg tgagcacatg 540
 ggcattgccc atctgtcctg ttctgatatc tccatcaatg tctggtatgg gttggcagct 600
 gctcttctct ccacaggcct ggacatcatg cttattactg ttctctacat ccacatctct 660
 caagcagctc tccgcctcct ttctcaagat gcccgcctca aggcctgag tacctgtgga 720
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 aggtttgttg ggagaagcat cccatgctat gtccatattc tcttgccag cctctacgtt 840
 gtcattctct ctatgctcaa tcccgttatt tatggagtga ggactaagcc aatactggaa 900
 ggggctaagc agatgttttc aaatcttgcc aaagga 936

<210> 902
 <211> 994
 <212> DNA
 <213> Unknown (H38g752 nucleotide)

<220>
 <223> Synthetic construct

<400> 902

agcattcttt	tcctttatatt	ctcattgctg	caggcatcct	ctgattttct	aataacattg	60
atgaagaact	gtacagaagt	gacagagttc	atcctcctgg	gactaaccaa	tgctccagag	120
ctacaagtcc	ccctccttat	catgttcact	ctcatatacc	ttgtcaatgt	ggttggaaac	180
ctggggatga	ttgttttaat	tggttgggac	attcatctcc	acactcccat	gtattttttc	240
ctcagtcacc	tgtctctagt	ggacttttgt	tactcttcag	ctgtcactcc	cacagtcata	300
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ttttttgcag	cctttgccac	tgtggaaaat	ttcctcttgg	cctcaatggc	ctatgaccgc	420
tatgatgcag	tgtgcaaacc	cctacattac	accaccacca	tgacaacaag	tgtgtgtgca	480
tgtctggcta	taactctgta	tgtctgtggt	ttcttgaatg	cctccataca	cattggggaa	540
acattgtctc	tctttctgta	tgtccaatga	agtcatttgc	tttttctgtg	atgttccacc	600
agtcattggt	ctgtcttgc	gtgatagaca	tgtgaatgag	ctagtcttca	tttatgtagc	660
cagtttcaat	atcttttctg	ccatcctagt	tatcttgatc	tcctacctat	tcataattat	720
caccatccta	aagatgcact	cagcttcagg	ataccagaag	gctttgtcca	cctgtgcctc	780
ccacctcact	gcagtcac	tcttctatgg	gactattatc	ttcatgtact	tacagcccag	840
ctctggtcac	tccatggaca	cagacaaact	ggcatctgtg	ttctatacta	tgatcatccc	900
catgctgaac	cccctggtct	atagcctgag	gaacaacgaa	gtgaagagcg	cattcaagaa	960
agttattgag	aaggcaaaat	tgtctctatt	attg			994

<210> 903

<211> 954

<212> DNA

<213> Unknown (H38g753 nucleotide)

<220>

<223> Synthetic construct

<400> 903

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ccagggctgg	aggctgcca	cttctggatt	gccatccctt	tctgtgccat	gtatcttgta	120
gcaactggtg	gaaatgctgc	cctcatcctg	gtcattgcca	tggaacaatgc	tcttcatgca	180
cctatgtacc	tcttctctg	ccttctctca	ctcacagacc	tggtctcag	ttctaccact	240
gtgcccaga	tgctggccat	tttgtggctc	catgctgggtg	agatttccct	tggtggatgc	300
ctggcccaga	tgttttgtgt	ccattctatc	tatgctctgg	agtcctcgat	tctacttgcc	360
atggcctttg	ataggatgt	ggctatctgt	aaccatttaa	ggtaacaaac	cattctcaac	420
catgctgtca	taggcagaat	tggtcttgtt	gggtatttcc	gtagtgtggc	tattgtctcc	480
cccttcatct	tcttgcctgag	gcgactcccc	tactgtgggtc	accgtgtcat	gacacacaca	540
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tatgggctaa	ctgtggctct	gctggccatg	ggactggatt	ccattctcat	tgccatttcc	660
tatggcttta	tcctccatgc	agtctttcac	cttccatctc	atgatgccc	gcacaaagct	720
ctgagtacct	gtggctccca	cattggcacc	atcctgggtt	tctacatccc	tgcccttctc	780
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<211> 989

<212> DNA

<213> Unknown (H38g754 nucleotide)

<220>

<223> Synthetic construct

<400> 904

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